UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

IN RE GSE BONDS ANTITRUST LITIGATION	Docket No. 1:19-cv-01704-JSR **SECOND CONSOLIDATED AMENDED CLASS ACTION COMPLAINT** **JURY TRIAL DEMANDED**

Joseph M. Torsella, in his official capacity as the Treasurer of the Commonwealth of Pennsylvania and statutory custodian of all Commonwealth Funds; City of Birmingham Retirement and Relief System; Electrical Workers Pension Fund Local 103, I.B.E.W.; and Local 103, I.B.E.W. Health Benefit Plan (collectively, "Plaintiffs"), individually and on behalf of all others similarly situated, complain upon knowledge as to their own acts and upon information and belief as to all other matters, against Defendants (defined below) for their violations of law from at least January 1, 2009 through January 1, 2016 (the "Class Period") as follows:

INTRODUCTION

1. This case involves a conspiracy by Defendants to avoid a "race to the bottom" by fixing the price of unsecured debt issued by government sponsored entities ("GSEs"), including the Federal National Mortgage Association ("Fannie Mae"), Federal Home Loan Mortgage Corporation ("Freddie Mac"), Federal Farm Credit Banks ("FFCB"), and Federal Home Loan Banks ("FHLB") (collectively "GSE Bonds"). Direct evidence provided by a cooperating co-conspirator confirms the agreement and economic analysis details pricing patterns consistent with such behavior.

2. Defendants are horizontal competitors in the GSE Bond market. During the Class Period, Defendants were the largest underwriters in the primary market involved in the process that

GSEs use to issue debt (the "GSE Issuance Process") and the largest dealers of GSE Bonds to investors in the secondary market. This gave Defendants control over the GSE Bond supply ultimately available to investors and thus the prices of those bonds.

3. In June 2018, reports emerged that the U.S. Department of Justice Antitrust Division ("DOJ") was investigating price-fixing in the secondary market for GSE Bonds. These reports were confirmed when a cooperating co-conspirator provided Plaintiffs with smoking gun direct evidence of a conspiracy among major GSE Bond dealers to fix the prices of GSE Bonds traded in the secondary market during the Class Period. This direct evidence of conspiracy shows that Defendants inflated the prices of newly issued GSE Bonds acquired through the GSE Issuance Process throughout the Class Period by fixing the price those bonds were "free to trade" ("FTT") in the secondary market at artificially higher, anticompetitive levels. For example, in the chat below, Morgan Stanley, Deutsche Bank and BNP Securities ***agree to fix*** the FTT price for a newly issued GSE Bond at an artificially inflated price of $99.985:

February 17, 2012

DBSI Trader 1: How are you guys doing? We have 100mm left

Morgan Stanley Trader: 150mm left

BNP Securities Trader: I'd say free it up given the cheapening trend of FHLB

BNP Securities Trader: $140mm left

Morgan Stanley Trader: I just **don't want to create a race to the bottom** between the 3 of us, doesn't help anyone.

* * *

DBSI Trader 1: go out FTT 99.985?

Morgan Stanley Trader: Sure FTT at 99.985

BNP Securities Trader: Good by me.

4. The cooperating co-conspirator has disclosed examples, like the one above, in which Defendants and other GSE Bond dealers agreed to inflate and/or maintain artificial prices for GSE Bonds throughout the Class Period. Among those directly implicated in conspiratorial multi-bank chats regarding pricing in the secondary market for GSE Bonds are Defendants Barclays, Bank of America/Merrill Lynch, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, BNP Paribas, First Tennessee, TD Securities, Morgan Stanley, Nomura, JPMorgan, Cantor Fitzgerald, UBS, and HSBC.

5. Defendants' unlawful agreement exploited both the structure of the vast over-the-counter ("OTC") secondary market for GSE Bonds and the lack of systems and controls in place during the Class Period to detect such misconduct. Unlike stocks, which trade on a national exchange at publicly visible prices, investors looking to buy or sell GSE Bonds in the OTC market must typically communicate directly with a salesperson or trader to request a price quote. Prices are given individually by dealers in response to such requests made by phone or in electronic chats, making the process of pricing a GSE Bond slow and opaque compared to exchange-based markets, like the stock market, where a multitude of banks and investors and other agents can see price information updated in real-time as they trade. This opaque structure supported Defendants' agreement to unlawfully increase their own profits at the expense of Plaintiffs and the Class by fixing the prices of GSE Bonds.

6. In line with the information provided by the cooperating co-conspirator, economic analyses show pricing patterns consistent with an agreement among Defendants to charge supracompetitive prices for GSE Bonds throughout the Class Period. Plaintiffs analyzed pricing data for over 13,117 GSE Bonds encompassing a total of 1.6 million GSE Bond transactions and found several unique patterns.

7. *First*, economic analysis shows that Defendants consistently charged investors higher prices for newly issued GSE Bonds in the secondary market following GSE Bond issuances. Inflating prices after GSE Bond issuances was lucrative for Defendants because a significantly larger volume of GSE Bond sales occur in the week following a GSE Bond issuance compared to later periods. Consequently, each Defendant had the common motive to inflate the prices of these products by charging agreed-upon, supracompetitive prices to investors. This practice stabilized prices at which newly issued GSE Bonds were sold in the secondary market at supracompetitive levels, securing higher profits for Defendants at the direct expense of investors like Plaintiffs and the Class.

8. *Second*, economic analysis shows that the prices of the most recently issued GSE Bonds consistently increased in the days before each new issuance. These observed price increases are unexplained by other market factors and are, in fact, the opposite of what is expected in a competitive market. Consistent with Defendants' conspiracy to inflate the prices of GSE Bonds following new issuances, the observed price increases indicate that Defendants drove the market price for the latest set of GSE Bonds artificially higher just before new issuances to support the inflated FTT prices they agreed to fix for newly issued GSE Bonds.

9. *Finally*, Defendants' conspiracy resulted in artificially wider bid-ask spreads in the GSE Bond market. Economic analysis shows that Defendants' agreement not to compete in the secondary market caused bid-ask spreads to artificially widen throughout the Class Period. This is highlighted by the statistically significant, and otherwise unexplained, narrowing of bid-ask spreads observed in the GSE Bond market after the Class Period. The inflation of bid-ask spreads during the Class Period caused Plaintiffs and the Class to pay more and receive less than they should have in each GSE Bond transaction, increasing Defendants' profits at their expense.

10. The observed inflation in GSE Bond prices and widening of the bid-ask spreads is also inconsistent with the overall trend towards electronic trading and price reporting in the GSE Bond market during the Class Period. For example, at least as early as 2010, FINRA required its members to report all secondary market GSE Bond transactions to its Trade Reporting and Compliance Engine ("TRACE"), which provides post-trade price information to the public. Academic studies show that in an OTC market (such as the one for GSE Bonds) the increased transparency supposedly created by TRACE should have resulted in a decline in investor trading costs, *i.e.*, narrower bid-ask spreads, the exact opposite of what happened here.

11. The economic fingerprints that Defendants' conspiracy left on the GSE Bond market diminish after January 2016, when the cooperating co-conspirator discovered the anticompetitive conduct alleged herein. As the cooperating co-conspirator explained, Defendants' GSE Bond price-fixing conspiracy was able to persist through the earlier government investigations into the LIBOR and FX rate manipulations because the ban on multi-bank chat rooms adopted as a result of these investigations – which found that traders used electronic chatrooms to fix prices, share proprietary trading and customer order information, and manipulate pricing benchmarks – provided certain exceptions for banks involved in syndicates, like those used to underwrite and bring GSE Bonds to market. As a result, traders involved in GSE Bond syndicates at the Defendants were allowed to participate in multi-bank chat rooms to discuss pricing even though such conduct was prohibited among traders of different products at the same bank. The example chats included in this Complaint show that Defendants' traders exploited this loophole by using multi-bank chat rooms to unlawfully fix prices of GSE Bonds in the secondary market.

12. Defendants' agreement to restrain trade in the GSE Bond market is but the latest instance of collusion and price-fixing in financial markets by these same Defendants. Extensive

government findings show that Defendants maintained deficient compliance and oversight programs in their trading and sales businesses, and instead encouraged traders to participate in chat rooms with their competitors. That Defendants' "meetings" in the electronic chat rooms lead to increased costs to Class members during the Class Period is an entirely predictable result. Given the persistent, pervasive, and secret nature of Defendants' conspiracy, as well as the existence of ongoing governmental investigations into the misconduct alleged herein, Plaintiffs believe that additional evidentiary support for their claims will be unearthed in discovery.

JURISDICTION AND VENUE

13. This Court has subject matter jurisdiction over this action pursuant to Section 1 of the Sherman Antitrust Act, 15 U.S.C. §1, and Sections 4 and 16 of the Clayton Act, 15 U.S.C. §§15 and 26, respectively, and pursuant to 28 U.S.C. §1331.

14. Venue is proper in this District, pursuant to, among other statutes, Sections 4, 12, and 16 of the Clayton Act; 15 U.S.C. §§15, 22, and 26; and 28 U.S.C. §1391(b), (c) and (d). During the Class Period, each Defendant resided, transacted business, was found, or had agents in the District; a substantial portion of the events or omissions giving rise to Plaintiffs' claims occurred in this District; and a substantial portion of the affected interstate trade and commerce discussed herein has been carried out in this District, as more particularly alleged in Part II, below. For example, Defendants Barclays Capital Inc., Merrill Lynch Pierce Fenner & Smith, Inc., Citigroup Global Markets Inc., Credit Suisse Securities (USA) LLC, Deutsche Bank Securities, Inc., Goldman Sachs & Co. LLC, J. P. Morgan Securities LLC, Morgan Stanley & Co., LLC; BNP Paribas Securities Corp., TD Securities (USA) LLC, Nomura Securities International, Inc., Cantor Fitzgerald & Co., HSBC Securities (USA) Inc., SG Americas Securities LLC, and UBS Securities LLC are headquartered in this District. Defendants First Tennessee Bank, National Association

and FTN Financial Securities Corp. conduct business in this District through their subsidiaries as agents and through branch offices located in this District, as more particularly alleged below. All of Defendants' GSE Bonds trading desks are located in the United States, with the majority located in New York, New York and one being located in Memphis, Tennessee.

15. This Court has personal jurisdiction over each Defendant. Defendants are all domestic corporations with their principal place of business in the United States. As alleged below, a substantial part of the events giving rise to Plaintiffs' claims occurred in this District and the United States. Defendants conspired to fix the prices of GSE Bonds that Defendants traded in this District and with customers located in the United States. Defendants' price-fixing conspiracy harmed investors in this District and throughout the United States by causing them to pay more for their GSE Bond purchases and receive less on their GSE Bond sales than they would have in a competitive market.

16. Defendants, either themselves or through their subsidiaries as agents, purposefully availed themselves of doing GSE Bond business in the United States and in this District by, *inter alia*: (a) enacting their conspiracy here by charging artificial, agreed-upon prices in GSE Bond transactions with investors in this District and throughout the United States; and (b) collecting unlawful overcharges from investors in this District and throughout the United States.

PARTIES

17. Plaintiff **Joseph M. Torsella, in his official capacity as the Treasurer of the Commonwealth of Pennsylvania**. Plaintiff Torsella is the Treasurer of the Commonwealth of Pennsylvania and the head of the Pennsylvania Office of the State Treasurer ("PA Treasury"). PA Treasury is an independent executive office established by the Constitution of the Commonwealth of Pennsylvania, Article IV, §1, 18 and headquartered in Harrisburg, Pennsylvania.

18. The Treasurer's powers and responsibilities are both inherent to the office and statutorily derived. Among these duties, the State Treasurer is the sole and exclusive statutory custodian of virtually all state agency funds ("Commonwealth Funds"), with a fiduciary obligation to safeguard and protect all Commonwealth assets within his custodial care. To this end, all Commonwealth agencies are obligated to deposit Commonwealth moneys as directed by the Treasurer. Commonwealth Funds total more than $100 billion and include the Public School Employees' Retirement System, the State Employees' Retirement System, the Pennsylvania Municipal Retirement System, the State Workers' Insurance Fund, and the Workers' Compensation Security Fund. These funds serve as safety nets for thousands of Pennsylvania teachers, police officers, state agency employees, and others.

19. Due to their perceived safety and high credit quality, GSE Bonds have been a key component of Commonwealth Fund investments for many years. Commonwealth Funds transacted in more than $63 billion in GSE Bonds during the Class Period.

20. In addition to his custodial role, the Treasurer has independent investment management authority over approximately $19.5 billion in Commonwealth Funds, including Long-term Investment Pool 198, Short-term Investment Pool 99, and the Tuition Account Program, among others. Accordingly, the Treasurer has standing to pursue the claims at issue here on behalf of all Commonwealth Funds. He serves as a party here in his official capacity.

21. Throughout the Class Period, Commonwealth Funds participated in thousands of GSE Bond transactions, including directly with Defendants Barclays Capital, Inc.; Merrill Lynch, Pierce, Fenner, & Smith, Inc.; BNP Paribas Securities Corp.; Citigroup Global Markets Inc.; Credit Suisse Securities (USA) LLC; Deutsche Bank Securities Inc.; First Tennessee Bank, N.A.; FTN Financial Securities Corp.; Goldman Sachs & Co. LLC; J.P. Morgan Securities LLC; UBS

Securities LLC, Cantor Fitzgerald & Co., Morgan Stanley & Co., LLC, HSBC Securities (USA) LLC, TD Securities (USA) LLC; Nomura Securities International; and SG Americas Securities LLC. These transactions include GSE Bonds that the cooperating co-conspirator has specifically identified as being impacted by the conspiracy. As a result, Commonwealth Funds suffered monetary losses and antitrust injury when they were overcharged or underpaid in these transactions as a direct result of Defendants' conspiracy to fix the prices of GSE Bonds.

22. Plaintiff **City of Birmingham Retirement and Relief System** ("Birmingham") is a public pension fund created by statute that provides retirement, disability, and survivor benefits to eligible civil service employees, elected officials, and appointed employees of the City of Birmingham, Alabama. Throughout the Class Period, Birmingham participated in GSE Bond transactions directly with Defendants Citigroup Global Markets Inc.; First Tennessee Bank, N.A.; First Tennessee Securities, Inc.; Cantor Fitzgerald & Co.; Morgan Stanley & Co., LLC, and Merrill Lynch, Pierce, Fenner & Smith Inc. Birmingham suffered monetary losses and antitrust injury when it was overcharged or underpaid in these transactions as a direct result of Defendants' conspiracy to fix the prices of GSE Bonds.

23. Plaintiff **Electrical Workers Pension Fund Local 103, I.B.E.W.** ("IBEW 103 Pension Plan") is a defined benefit retirement plan that currently provides benefits to over 2,500 retired participants. IBEW 103 Pension Plan manages more than $1 billion in assets.

24. Plaintiff **Local 103, I.B.E.W. Health Benefit Plan** ("IBEW 103 Health Plan") is a health plan that currently provides benefits to over 16,500 lives including participants and their families. Participants are covered by a comprehensive benefits program designed to protect and provide for each Participant and their family through a broad range of unexpected events and extraordinary expenses.

25. IBEW 103 Pension Plan and IBEW 103 Health Plan are designed to provide financial stability and benefit security for all Local 103 members. IBEW Pension Plan and IBEW Health Plan are referred to collectively as "IBEW 103."

26. Throughout the Class Period, IBEW 103 participated in GSE Bond transactions directly with Defendants Barclays Capital, Inc.; BNP Paribas Securities Corp.; Citigroup Global Markets Inc.; Credit Suisse Securities (USA) LLC; Deutsche Bank Securities Inc.; Goldman Sachs & Co. LLC; J.P. Morgan Securities LLC; Cantor Fitzgerald & Co.; HSBC Securities (USA) Inc.; Morgan Stanley & Co., LLC; Nomura Securities International, Inc.; SG Americas Securities, LLC; TD Securities (USA) LLC; and UBS Securities LLC. IBEW 103 suffered monetary losses and antitrust injury when it was overcharged or underpaid in these transactions as a direct result of Defendants' conspiracy to fix the prices of GSE Bonds.

27. **Barclays**: Defendant Barclays Capital Inc. ("BCI") is a wholly owned subsidiary of Barclays Bank PLC, incorporated in the state of Connecticut, with its headquarters in New York, New York and domestic branch offices in at least 15 other U.S. cities. BCI is the main U.S. broker-dealer entity for the Barclays group of entities and is a U.S. registered securities broker-dealer with the SEC; a futures commission merchant, a commodity pool operator, a commodity trading advisor registered with the Commodity Futures Trading Commission ("CFTC"); and a municipal advisor registered with the SEC. BCI is registered as a "4(k)(4)(E)" securities subsidiary under the Bank Holding Company Act, which permits it to engage in securities underwriting, dealing, and market-making activities.

28. Barclays Bank PLC, operating under the trade name "Barclays Investment Bank," is headquartered in London, England and provides investment banking advisory services, foreign exchange securities lending, and loan syndication services through at least three offices in the

United States, including its New York Branch located in this District. Barclays Bank PLC's macro market line of business is supported by trading desks that specialize in dealing GSE Bonds. Barclays Bank PLC is a direct, wholly owned subsidiary of Barclays PLC, a multinational financial services corporation.

29. BCI's activities include transactions in asset-backed securities, agency mortgage-backed securities, debt securities, other corporate related securities, equities, resale and repurchase agreements, securities lending and borrowing, and clearing derivative products. It is an approved dealer for Fannie Mae, Freddie Mac, FHLB, and FFCB, providing BCI access to GSE Bond supply through the GSE Issuance Process. As of December 31, 2017, BCI held $8.5 billion in agency securities, a category that includes GSE Bonds.[1] During the Class Period, BCI employees located in this District priced, marketed, and dealt GSE Bonds to members of the Class.

30. During the Class Period, Commonwealth Funds and IBEW 103 transacted in GSE Bonds directly with BCI.

31. BCI performed its GSE Bond business in the United States and in this District.

32. BCI conducts GSE-related activities, including GSE Bond dealing with investors, as part of Barclays Bank PLC's "Barclays Investment Bank" division. Barclays Investment Bank (which includes both Barclays Bank PLC and BCI) maintains a website in the United States where it advertises that "We serve our institutional investor clients by helping them to understand developments in global markets and offering execution and risk management tools across each major asset class." One of the ways in which BCI serves its institutional investor clients is by

[1] The terms "agency securities" and "agency bonds" are catch-all terms sometimes used to refer to debt instruments issued by agencies of the United States Federal government and entities sponsored by the Federal government, like Fannie Mae and Freddie Mac. These terms include GSE Bonds.

transacting in GSE Bonds with investors like Plaintiffs. Barclays Investment Bank "integrates our primary offering capabilities on behalf of issuer clients (*e.g.*, BCI's GSE Bond underwriting activities in the GSE Issuance Process) with ***our*** secondary trading capabilities on behalf of ***our*** investor clients (*e.g.*, BCI's GSE Bond transactions with investors including Plaintiffs and the Class)" (emphasis added). These allegations show that BCI transacted in GSE Bonds in the United States.

33. **Bank of America/Merrill Lynch**: Defendant Merrill Lynch, Pierce, Fenner, & Smith, Inc. ("Merrill Lynch") is a wholly owned indirect subsidiary of Bank of America Corporation and a corporate affiliate of Bank of America, N.A. ("BANA"). Merrill Lynch is incorporated in Delaware, with its principal place of business in New York, New York. Merrill Lynch acts as a broker and a dealer in the purchase and sale of various financial instruments, including GSE Bonds throughout the United States and in this District. It provides underwriting services and is registered as a broker-dealer and investment advisor with the SEC. Merrill Lynch is the primary broker-dealer for the Bank of America Corporation corporate family, including BANA, and prices, markets, and sells GSE Bonds on behalf of BANA.

34. BANA is an American global bank and financial services company incorporated in Delaware and headquartered in Charlotte, North Carolina with operations in all 50 states. Bank of America Corporation, the parent company of BANA, completed its purchase of Defendant Merrill Lynch on January 1, 2008 and continued operating its debt and equity underwriting sales and trading business after that date by merging Merrill Lynch with Bank of America Corporation's former broker-dealer subsidiary, Banc of America Securities LLC. Bank of America Corporation also assumed all liabilities and obligations of Merrill Lynch on October 1, 2013.

35. Bank of America Corporation reports its financial position on a consolidated basis, which includes the activities of both BANA and Merrill Lynch. As of December 31, 2017, Bank of America Corporation held over $440 billion in debt securities, including GSE Bonds. During the Class Period, Bank of America Corporation performed investment banking activities, including dealing GSE Bonds to investors, through its wholly owned subsidiary Merrill Lynch.

36. During the Class Period, Commonwealth Funds and Birmingham transacted in GSE Bonds directly with Defendant Merrill Lynch.

37. As of December 31, 2017, Merrill Lynch held over $440 billion in U.S. Treasury and government agency securities, a category that includes GSE Bonds. Merrill Lynch and BANA were approved dealers for Fannie Mae, Freddie Mac, FHLB, and FFCB throughout the Class Period.

38. Bank of America Corporation is responsible for internal controls, compliance, and oversight for both BANA and Merrill Lynch. It handles "Fixed Income Compliance," which includes monitoring and detecting unlawful conduct within Merrill Lynch's and BANA's sales and trading businesses, including Merrill Lynch's and BANA's GSE Bond dealing activities.

39. **Citi**: Citigroup, Inc. is a global banking institution headquartered in New York, New York. It is the ultimate parent of its wholly owned dealer-subsidiary, Defendant Citigroup Global Markets Inc. ("CGMI"). As of December 31, 2017, Citigroup, Inc. reported that "fair value levels" of all "U.S. Treasury and federal agency securities" held by itself and its subsidiaries (including CGMI) was approximately $21 billion.

40. CGMI is a New York corporation with its principal place of business in New York, New York. CGMI has been registered with the SEC since 1960 as both an investment adviser and a broker-dealer. CGMI currently has approximately 43,000 advisory accounts and $22 billion USD

in regulatory assets under management.[2] During the Class Period, CGMI dealt GSE Bonds to investors, including Plaintiffs, from offices located in this District.

41. Citigroup Inc. manages internal controls, oversight, and compliance for CGMI. In this capacity, it is responsible for monitoring CGMI's activities and detecting violations of law, including CGMI's GSE Bond-related activities.

42. As of June 18, 2018, CGMI reported that it has assets of approximately $17 billion in U.S. Treasury and federal agency securities (a category that includes GSE Bonds), and over $20 billion in liabilities of the same.

43. CGMI is an approved dealer for Freddie Mac, FHLB, and FFCB.

44. During the Class Period, Plaintiffs transacted in GSE Bonds directly from CGMI.

45. **Credit Suisse**: Defendant Credit Suisse Securities (USA) LLC ("CS Securities") is a wholly owned subsidiary of Credit Suisse AG ("CS AG"), organized under the laws of Delaware with its principal place of business in New York, New York. CS Securities is a "Material Legal Entity" according to CS AG's latest U.S. Resolution Plan, described as the "U.S. broker dealer" and "main U.S. operating company" of CS AG. It is a U.S. registered broker-dealer, providing capital raising, market making, advisory, and brokerage services. It is an underwriter, placement agent, and dealer for money market instruments, mortgage and other asset-backed securities, as well as a range of debt, equity, and other convertible securities of corporations and other issuers. Until November 2017, CS Securities was a primary dealer in U.S. government securities. In November 2017, CS Securities transitioned its primary dealer license and a substantial portion of its U.S. Government and Agency Primary Dealership, secondary market trading, and repo market

[2] The SEC defines regulatory assets under management as "securities portfolios for which you provide continuous and regular supervisory or management services."

making to Credit Suisse AG, New York Branch. CS Securities is an approved dealer for both Fannie Mae and Freddie Mac, ensuring access to GSE Bond dealing inventory that it used in transactions with investors.

46. CS AG is a multinational banking and financial services company which engages in banking, finance, consultancy, and trading activities in the United States and worldwide. CS AG has a primary U.S. office located in New York, New York referred to as "Credit Suisse AG, New York Branch." Credit Suisse AG, New York Branch ("CS NY") is a legal and operational extension of CS AG in the United States and is not a separately incorporated entity. CS NY is a primary dealer in U.S. government securities and trades with the Federal Reserve Bank of New York in this District in agency debt, which includes GSE Bonds. Through its New York Branch, CS AG serves as a dealer in U.S. government and agency securities, including GSE Bonds.

47. CS AG has direct and indirect subsidiaries based in the United States, including Defendant CS Securities. CS AG is registered to do business in New York with the New York State Department of Financial Services. As of October 2017, CS AG held over $1 billion in GSE Bonds.

48. CS AG manages internal controls, oversight, and compliance for CS Securities. In this capacity, it is responsible for monitoring CS Securities' activities and detecting violations of law, including CS Securities' GSE Bond dealing activities.

49. During the Class Period, Commonwealth Funds and IBEW 103 transacted in GSE Bonds directly from CS Securities.

49a. **Deutsche Bank**: Defendant Deutsche Bank Securities Inc. ("DBSI"), formerly known as Deutsche Banc Alex. Brown Inc., is a wholly owned subsidiary of Deutsche Bank AG. It is incorporated in Delaware with its principal place of business in New York, New York. DBSI

is a registered securities broker-dealer and investment advisor with the SEC, a futures commission merchant with the CFTC, and a member of FINRA. DBSI provides capital raising, market making, and brokerage services for its governmental, financial institution, and corporate clients. As of December 31, 2017, DBSI held over $2 billion in U.S. Government agency obligations, a category that includes GSE Bonds. DBSI is an approved dealer for Fannie Mae, Freddie Mac, FFCB, and FHLB, ensuring access to GSE Bond inventory to trade with investors. During the Class Period, DBSI employed trading and sales staff who priced, marketed, and dealt GSE Bonds to members of the Class, including Plaintiffs, from within this District.

49b. During the Class Period, Plaintiffs purchased and/or sold GSE Bonds from DBSI.

50. **Goldman Sachs**: Defendant Goldman Sachs & Co. LLC ("Goldman Sachs") is a wholly owned subsidiary of Goldman Sachs Group Inc., organized under New York Law with its principal place of business in New York, New York. Goldman Sachs is a registered broker-dealer with the SEC and trades financial products in all 50 states and the District of Columbia. It is registered with the CFTC as a futures commission merchant and a swap dealer. As of December 2016, Goldman Sachs held over $44 billion in U.S. government and federal agency obligations, a category that includes GSE Bonds.

51. During the Class Period, Goldman Sachs employed GSE Bond trading and sales staff based in the United States and in this District, who priced, marketed, and dealt GSE Bonds to investors, including Plaintiffs.

52. Goldman Sachs Execution & Clearing, L.P. was a wholly owned subsidiary of Goldman Sachs Group, Inc. that offered trade execution and clearing services to other subsidiaries within the Goldman Sachs brand. Goldman Sachs Execution & Clearing, L.P. also executed GSE

Bond trades with Plaintiffs and members of the Class at artificial prices during the Class Period, until it was acquired by Goldman Sachs in or around August 2017.

53. Goldman Sachs is an approved dealer for Fannie Mae, Freddie Mac, FHLB, and FFCB, ensuring access to GSE Bond inventory.

54. During the Class Period, Commonwealth Funds and IBEW 103 transacted in GSE Bonds directly with Defendant Goldman Sachs.

55. **JPMorgan**: Defendant J.P. Morgan Securities LLC ("JPMS"), previously known as J.P. Morgan Securities Inc., is a Delaware limited liability company with its headquarters in New York, New York. It is a wholly owned and "principal" subsidiary of JPMorgan Chase & Co., which is the parent company of JP Morgan Chase Bank, National Association ("JPM NA"). JPMS is registered with the SEC as a broker-dealer and investment advisor and registered with the CFTC as a futures commission merchant. JPMS acts as a primary dealer in U.S. government securities, makes markets in GSE Bonds, and clears OTC derivative contracts in connection with its corporate affiliates' market-making and risk management activities. JPMS is an approved dealer for Fannie Mae, Freddie Mac, FHLB, and FFCB, providing access to GSE Bond inventory through the GSE Issuance Process that JPMS and its affiliates, including JPM NA, use when dealing GSE Bonds to investors. During the Class Period, JPMS dealt GSE Bonds to members of the Class, including Plaintiffs, from offices located in this District.

56. JPM NA is a wholly owned "principal subsidiary" of JPMorgan Chase & Co., headquartered in New York, New York. It is a national banking association with branches in at least 23 U.S. states. As of February 2, 2018, JP MNA held over $1.7 billion in U.S. government agency and U.S. government-sponsored agency debt securities, a category that includes GSE

Bonds. During the Class Period, JP MNA traded GSE Bonds with members of the Class from within this District.

57. On October 1, 2016, JPMS acquired J.P. Morgan Clearing Corp., which was known as Bear Stearns Securities Corp. until October 2008. J.P. Morgan Clearing Corp. offered execution and clearing services for corporations affiliated under the "JPMorgan" brand name, and, in that capacity executed GSE Bond trades with Commonwealth Funds and members of the Class at artificial prices.

58. JPMorgan Chase & Co. manages internal controls, oversight, and compliance for its subsidiaries including JP MNA and JPMS. In this capacity, it is responsible for monitoring JPMorgan Chase & Co.'s Fixed Income business unit, which encompasses JP MNA's and JPMS' GSE Bond-related activities.

59. During the Class Period, Commonwealth Funds and IBEW 103 transacted in GSE Bonds directly with Defendant JPMS.

60. **UBS**: UBS AG is a multinational banking and financial services corporation which engages in banking, financial, advisory, and trading service activities worldwide. It is headquartered in Basel, Switzerland. UBS AG maintains several branch and representative offices in the U.S. and is registered as a swap dealer with the CFTC. UBS AG reports that it conducts securities activities in the United States primarily through UBS Securities LLC. As of October 2018, UBS AG held over $304 million in GSE Bonds.

61. Defendant UBS Securities LLC ("UBS Securities") is an indirect, wholly owned subsidiary of UBS AG with its principal place of business in New York, New York. It is a registered broker-dealer under the Securities Exchange Act of 1934 and is a member of the New York Stock

Exchange, FINRA, NASDAQ, and other principal exchanges. UBS Securities provides a full range of investment banking services, including trading and sales and prime brokerage operations.

62. As of December 31, 2017, UBS Securities held over $5.7 billion in U.S. government and agency obligations, a category that includes GSE Bonds. UBS Securities is an approved dealer for Fannie Mae, Freddie Mac, FHLB, and FFCB ensuring access to GSE Bond inventory through the GSE Issuance Process. During the Class Period, UBS Securities priced, marketed, and dealt GSE Bonds to investors from offices located in this District.

63. UBS AG manages internal controls, oversight, and compliance for UBS Securities. In this capacity, it is responsible for monitoring UBS Securities' activities and detecting violations of law, including by UBS Securities' GSE Bond dealing businesses.

64. During the Class Period, Commonwealth Funds and IBEW 103 transacted in GSE Bonds direct with Defendant UBS Securities.

65. **First Tennessee**: Defendant First Tennessee Bank, N.A. ("First Tennessee") is a financial services company based in Memphis, Tennessee. It operates a large debt capital markets division that focuses on public issuers such as Fannie Mae and Freddie Mac and on trading and selling debt instruments to institutional investors such as Plaintiffs and members of the Class. First Tennessee calls this division "FTN Financial Capital Markets."

66. First Tennessee is registered with the SEC as a broker-dealer in government securities. As of December 31, 2012, First Tennessee and its subsidiaries, including FTN Financial Securities Corp., held over $3 million in government agency securities, a category that includes GSE Bonds. During the Class Period, either independently and/or through FTN Securities Corp., First Tennessee priced, marketed, and dealt GSE Bonds to investors in this District during the Class Period.

67. Defendant FTN Financial Securities Corp. ("FTN Financial") is a wholly owned subsidiary of First Tennessee and operates as part of First Tennessee's FTN Financial Capital Markets division. It is one of the largest underwriters of GSE Bonds and dealt GSE Bonds to institutional investors.

68. FTN Financial performed GSE Bond business in this District with the knowledge and consent of, for the benefit of, and under some control by First Tennessee, as alleged below.

69. Both First Tennessee and FTN Financial comprise First Tennessee's FTN "Financial Capital Markets division" and as such, conduct mutually beneficial GSE Bond-related activities. First Tennessee acquires GSE Bonds in the primary market by serving as an underwriter in the GSE Issuance Process. FTN Financial is described as "our capital markets business" in the Annual Report for First Tennessee and their mutual parent holding company, First Horizon National Corp. ("First Horizon"). In this capacity, FTN Financial provides GSE Bond dealing services to investors, selling and trading GSE Bonds acquired by First Tennessee. As described in the Annual Report, "FTN Financial provides a broad spectrum of financial services for the investment and banking communities through the integration of traditional capital market securities activities, loan sales, portfolio advisory services, and derivative sales."

70. First Tennessee and FTN Financial operate as a single integrated unit, with operations by FTN Financial advertised under the same trade name and on the same website as First Tennessee. FTN Advisors is the trade name for wealth management products and services provided by First Tennessee and its affiliates. The FTN Advisors website represents itself as an advisor and seller of agency bonds, a category that includes GSE Bonds. The FTN Financial website advertises that, "whether it's providing mortgage trading, underwriting agency debt, providing customized portfolio strategies or more, we serve approximately 4,700 institutional customers in more than 50

countries." The FTN Financial website boasts that "we are backed by $2.9 billion in capital as a division of First Tennessee Bank, N.A., which we don't hesitate to put behind every underwriting in which we participate," indicating that First Tennessee consented to and benefits from FTN Financial's GSE Bond-related business activities.

71. First Tennessee reports its results on a consolidated basis, under its holding company, First Horizon, which uses the overarching terms "our" and "we" to describe First Tennessee and FTN Financial, with both explicitly listed as comprising "our core business." In its financial reports, First Horizon consolidates revenues generated by First Tennessee and FTN Financial.

72. FTN Financial has a significant GSE Bond-related business presence in this District. For example, its Research Division markets GSE Bonds from offices located at FTN Financial's offices at 444 Madison Avenue, 9th Floor, New York, New York 10022.

73. During the Class Period, Commonwealth Funds and Birmingham transacted in GSE Bonds directly with Defendants First Tennessee and FTN Financial.

74. **BNP Paribas**: BNP Paribas S.A. ("BNPP SA") is one of the world's largest global banking organizations. It does business in 75 countries and employs over 180,000 people, including approximately 15,000 in the U.S. As of December 31, 2012, BNPP SA and its subsidiaries held approximately €69 trillion ($90 trillion) government bonds, a category that includes GSE Bonds. In the year 2012, it sold €93 trillion ($121 trillion) in government bonds, including GSE Bonds.

75. Defendant BNP Paribas Securities Corp. ("BNP Securities") is an indirect, wholly owned subsidiary of BNPP SA, headquartered in New York, New York. BNP Securities is a registered broker-dealer with the SEC. It is BNPP SA's "main broker dealer" in the U.S., and it is its most significant subsidiary in terms of assets, revenue, head count, and capital.

76. BNP Securities is a primary dealer in U.S. government securities and an approved dealer for Fannie Mae, Freddie Mac, FFCB, and FHLB. BNP Securities traded GSE Bonds with investors in the United States from offices located in this District during the Class Period. BNP Securities' broker-dealer business is composed overwhelmingly of highly liquid assets, including U.S. Treasury securities and agency debt (a category that includes GSE Bonds).

77. BNPP SA manages internal controls, oversight, and compliance for BNP Securities. In this capacity, it is responsible for monitoring BNP Securities' activities and detecting violations of law, including by BNP Securities' GSE Bond dealing business.

78. During the Class Period, Commonwealth Funds and IBEW 103 transacted GSE Bonds directly with Defendant BNP Securities.

79. **TD**: Defendant TD Securities (USA) LLC ("TD Securities") is a corporation organized under the laws of Delaware with its principal place of business in New York, New York. It is a broker-dealer registered with FINRA and the SEC, and is licensed to do business in all 50 states. TD Securities is an indirect wholly owned subsidiary of The Toronto-Dominion Bank.

80. TD Securities is a self-acknowledged "major participant in the Fixed Income markets." During the Class Period, TD Securities made trades for tens of billions of dollars' worth of GSE Bonds.

81. During the Class Period, TD Securities performed its GSE Bond business in the United States and in this District. During the Class Period, TD Securities employees located in this District priced, marketed, and dealt GSE Bonds to members of the Class.

82. During the Class Period, Commonwealth Funds and IBEW 103 transacted in GSE Bonds directly with Defendant TD Securities.

83. **Nomura**: Defendant Nomura Securities International, Inc. ("Nomura Securities") is a corporation organized under the laws of New York, with its principal place of business in New York, New York. Nomura Securities is registered with the SEC and FINRA, and is licensed to do business in all 50 states. Nomura Securities is a wholly owned subsidiary of Nomura Holdings, Inc.

84. Nomura Securities is an approved dealer for Freddie Mac, Fannie Mae, FHLB, and FFCB bonds.

85. During the Class Period, Nomura Securities made trades for hundreds of billions of dollars' worth of GSE Bonds.

86. During the Class Period, Nomura Securities performed its GSE Bond business in the United States and in this District. During the Class Period, Nomura Securities employees located in the United States and in this District priced, marketed, and dealt GSE Bonds to members of the Class.

87. During the Class Period, Commonwealth Funds and IBEW 103 transacted in GSE Bonds directly with Defendant Nomura Securities.

88. **HSBC**: Defendant HSBC Securities (USA) Inc. ("HSBC Securities") is a corporation organized under the laws of Delaware with its principal place of business in New York, New York. It is an indirect wholly owned subsidiary of HSBC Holdings plc. HSBC Securities is a broker dealer registered with FINRA and the SEC, and is licensed to do business in all 50 states.

89. HSBC Securities is an approved dealer for Freddie Mac, FHLB, and FFCB. HSBC Securities advertises on its U.S. website that it offers access to GSE Bonds.

90. During the Class Period, HSBC Securities made trades for tens of billions of dollars' worth of GSE Bonds.

91. During the Class Period, HSBC Securities performed its GSE Bond business in the United States. During the Class Period, HSBC Securities employees located in the United States priced, marketed, and dealt GSE Bonds to members of the Class.

92. During the Class Period, Commonwealth Funds and IBEW 103 transacted in GSE Bonds directly with Defendant HSBC Securities.

93. **Cantor Fitzgerald**: Defendant Cantor Fitzgerald & Co. ("Cantor Fitzgerald") is a partnership organized under the laws of New York, with its principal place of business in New York, New York. Cantor Fitzgerald is a registered broker-dealer with the SEC and FINRA, and is licensed to do business in all 50 states. Cantor Fitzgerald is a wholly owned subsidiary of Cantor Fitzgerald, L.P.

94. Cantor Fitzgerald is an approved dealer for Freddie Mac, Fannie Mae, FHLB, and FFCB. During the Class Period, Cantor Fitzgerald made trades for tens of billions of dollars' worth of GSE Bonds.

95. During the Class Period, Cantor Fitzgerald performed its GSE Bond business in the United States and in this District. During the Class Period, Cantor Fitzgerald employees located in this District priced, marketed, and dealt GSE Bonds to members of the Class.

96. During the Class Period, Plaintiffs transacted in GSE Bonds directly with Cantor Fitzgerald.

97. **Société Générale**: Defendant SG Americas Securities, LLC ("SG Securities") is a corporation organized under the laws of Delaware with its principal place of business in New York, New York. SG Securities is a registered broker dealer with the SEC and FINRA, and is licensed to do business in all 50 states. SG Securities is an indirect wholly owned subsidiary of Société Générale.

98. SG Securities is an approved dealer for Freddie Mac. During the Class Period, SG Securities was an approved dealer for Fannie Mae and FHLB. During the Class Period, SG Securities made trades for billions of dollars' worth of GSE Bonds.

99. During the Class Period, SG Securities performed its GSE Bond business in the United States and in this District. During the Class Period, SG Securities employees priced, marketed, and dealt GSE Bonds to members of the Class.

100. During the Class Period, Commonwealth Funds and IBEW 103 transacted in GSE Bonds directly with Defendant SG Securities.

101. **Morgan Stanley**: Defendant Morgan Stanley & Co., LLC ("MS&Co."), formerly known as Morgan Stanley & Co. Inc., is an indirect wholly owned broker-dealer subsidiary of Morgan Stanley. Morgan Stanley is a global financial services firm incorporated in Delaware and headquartered in New York, New York. As of December 31, 2017, Morgan Stanley reported that the "fair value" of the "U.S. Treasury and agency securities" held by it and its subsidiaries (including MS&Co.) was $22 billion.

102. MS&Co. is a Delaware corporation with its principal place of business in New York, New York. MS&Co. is registered with the SEC as a broker-dealer. During the Class Period, MS&Co. dealt GSE Bonds to investors, including Plaintiffs, from offices located in this District. MS&Co. was an approved dealer for Fannie Mae, Freddie Mac, FHLB, and FFCB throughout the Class Period.

103. Morgan Stanley manages internal controls, oversight, and compliance for MS&Co. In this capacity, it is responsible for monitoring MS&Co.'s activities and detecting violations of law, including MS&Co.'s GSE Bond-related activities.

104. As of December 31, 2017, MS&Co. reported that it had assets of approximately $28 billion in U.S. agency securities (a category that includes GSE Bonds), and over $211 million in liabilities of the same.

105. During the Class Period, Plaintiffs transacted in GSE Bonds directly with Defendant MS&Co.

106. Defendants DBSI, Merrill Lynch, JPMS, FTN Financial, BCI, UBS Securities, Goldman Sachs, Cantor Fitzgerald, HSBC Securities, CGMI, BNP Securities, CS Securities, TD Securities, Nomura Securities, and MS & Co. were approved dealers for debt securities issued by Fannie Mae, Freddie Mac, FHLB, and FFCB during the Class Period. SG Securities was an approved dealer for Fannie Mae, Freddie Mac, and FHLB during the Class Period. Defendants CGMI, and BNP Securities are approved dealers for debt securities issued by Fannie Mae, Freddie Mac, and FHLB. Defendant CS Securities is an approved dealer for debt securities issued by Fannie Mae and Freddie Mac. During the Class Period, these Defendants had access to GSE Bond supply through the GSE Issuance Process described in Part I.C, below, which they used to acquire GSE Bond inventory to deal to investors.

ADDITIONAL CO-CONSPIRATORS

107. Various entities that are not named as Defendants have participated in the violations alleged herein and have performed acts and made statements in furtherance thereof. Plaintiffs reserve the right to name some or all of these entities as Defendants at a later date. There is a finite number of co-conspirators and Plaintiffs believe that their identities can be ascertained through Defendants' own records, including, but not limited to the productions made by Defendants to government regulators.

SUBSTANTIVE ALLEGATIONS

I. BACKGROUND

A. The GSEs

108. GSEs are privately run enterprises sponsored by the federal government and established for a public purpose. Congress created Fannie Mae and Freddie Mac to provide liquidity, stability, and affordability in the national residential mortgage market. They provide liquidity (ready access to funds on reasonable terms) to banks and mortgage companies that make residential mortgage loans to consumers with the goal of making mortgage loans more affordable for consumers.

109. FLHB is a system of 11 regional banks that was created to support mortgage lending and related community investment.

110. FFCB is a part of the Farm Credit System and was created to provide American agricultural entities with dependable credit at competitive interest rates. FFCB issues bonds on behalf of four farm credit banks.

111. GSEs finance operations by issuing GSE Bonds. GSE Bond issuances occur several times a month, typically in a predictable pattern based on a pre-determined calendar. The great majority of newly issued GSE Bonds have similar or identical characteristics as existing GSE Bonds except that they mature on a later date.

112. Each GSE Bond issue is identified with a unique nine-digit alphanumeric code known as a Committee on Uniform Security Identification Procedures number ("CUSIP number"). The CUSIP number identifies specific provisions of each bond issue, such as issuer, coupon, issue date, maturity, and call provisions.

B. Characteristics of GSE Bonds

113. All GSE Bonds have core similarities that distinguish them as a single class of debt instruments.

114. GSE Bonds are all issued by Fannie Mae, Freddie Mac, FHLB, or FFCB, and therefore carry substantially similar levels of credit risk. Credit risk is the risk that an entity will default on its repayment obligations. Unlike U.S. Treasury bonds and bonds issued by certain federal agencies, GSE Bonds are not backed by the full faith and credit of the United States government, meaning they are not guaranteed by the federal government. Credit risk is generally low for GSE Bonds, however, because GSEs benefit from a perceived tie to the federal government as institutions established under federal legislation. Debt issued by GSEs generally has high credit quality. The senior debt of Fannie Mae and Freddie Mac is rated Aaa/AA+, while the subordinated debt of Fannie Mae and Freddie Mac is rated AA-/Aa-. The long-term debt of FHLB and FFCB is rated Aaa/AA+, while the short term debt of FHLB and FFCB is rated P-1/A-1+. In September 2008, the Federal Housing Finance Agency became the conservator of Fannie Mae and Freddie Mac, which permitted them to meet their obligations on over $1 trillion in outstanding bonds.

115. GSE Bonds are unregulated, unregistered OTC issuances that are exempt from the registration and disclosure provisions of the federal securities laws.

116. All Defendants operate trading desks that specialize in GSE Bond trading and sales in the United States, with the majority located in this District. Within each Defendant's sales and trading business, the same team that deals one issuers' GSE Bond to investors also deals all other issuers' GSE Bonds. Thus, the same employees within each Defendant's GSE Bond trading and sales business determine prices charged to investors in GSE Bond transactions for all types of GSE Bonds.

117. GSE Bonds also have other common features. These include face value, maturity, and coupon payment, explained below. Collectively, these characteristics are used to determine a GSE Bond's "yield to maturity," which is the annual return that the holder of a GSE Bond earns from the instrument.

118. The amount of money that a GSE owes to the holder of a GSE Bond upon maturity is known as the "face value," and the length of time between when a GSE Bond is issued and when a GSE Bond matures is known as its "maturity." The most recently issued GSE Bonds are known as "on-the-run" GSE Bonds, while all other, older GSE Bonds with similar characteristics are known as "off-the-run" GSE Bonds.

119. Most GSE Bonds pay a fixed rate of interest or fixed coupon rate semi-annually. Some GSE Bonds pay a variable or floating coupon rate that adjusts periodically based on a designated index. Fixed-rate GSE Bonds have fixed interest rates and fixed maturities. If held to maturity, they preserve their principal and offer certainty of cash flow. Prior to maturity, however, the market value of fixed-rate GSE Bonds fluctuates with changing interest rates. In a falling-rate environment, market values will rise, creating the potential for capital gains. In a rising-rate environment, prices will fall, creating the risk of loss when securities are sold prior to maturity. Prices move in the inverse direction of yields, so that when prices fall, yields rise. Because yields fluctuate with market conditions, yield spreads, *i.e.*, a GSE Bond's yield to maturity minus a chosen benchmark bond, are a common basis of comparison between bonds.

120. Medium-term GSE Bonds (GSE Bonds with maturities between two years and 10 years) and long-term GSE Bonds (GSE Bonds with maturities longer than 10 years) can also offer periodic interest payments known as "coupons." GSE Bond coupon payments occur semi-annually and are calculated by multiplying the interest rate specified for the GSE Bond (*e.g.*, 5%) by the

GSE Bond's face value (*e.g.*, $100,000). Thus, a coupon-bearing GSE Bond with a face value of $100,000 and a 5% coupon payment would entitle the holder to two interest payments of $2,500 paid every six months, for a total of $5,000 per year, until maturity. At maturity, the issuing GSE pays the holder the face value specified in the GSE Bond.

121. Short-term GSE Bonds do not offer coupon payments. Instead, short-term GSE Bonds are issued at a discount to face value. The difference between the price paid and the face value due upon maturity represents the interest that the GSE Bond purchaser earns in exchange for buying the short-term GSE Bond. For example, assume a purchaser pays $98,382.75 to purchase a short-term GSE Bond with a face value of $100,000 that matures in 120 days. When the purchaser redeems the GSE Bond at maturity, it receives the full $100,000 face value from the GSE, $1,617.25 more than what it paid to purchase that GSE Bond. The extra $1,617.25 represents the amount of interest that the GSE paid to borrow $98,382.75 for 120 days, or approximately 5% annually.

122. GSE Bonds can be non-callable, or "bullet," bonds or callable GSE Bonds that can be redeemed by the issuer prior to maturity.

C. The GSE Bond Market

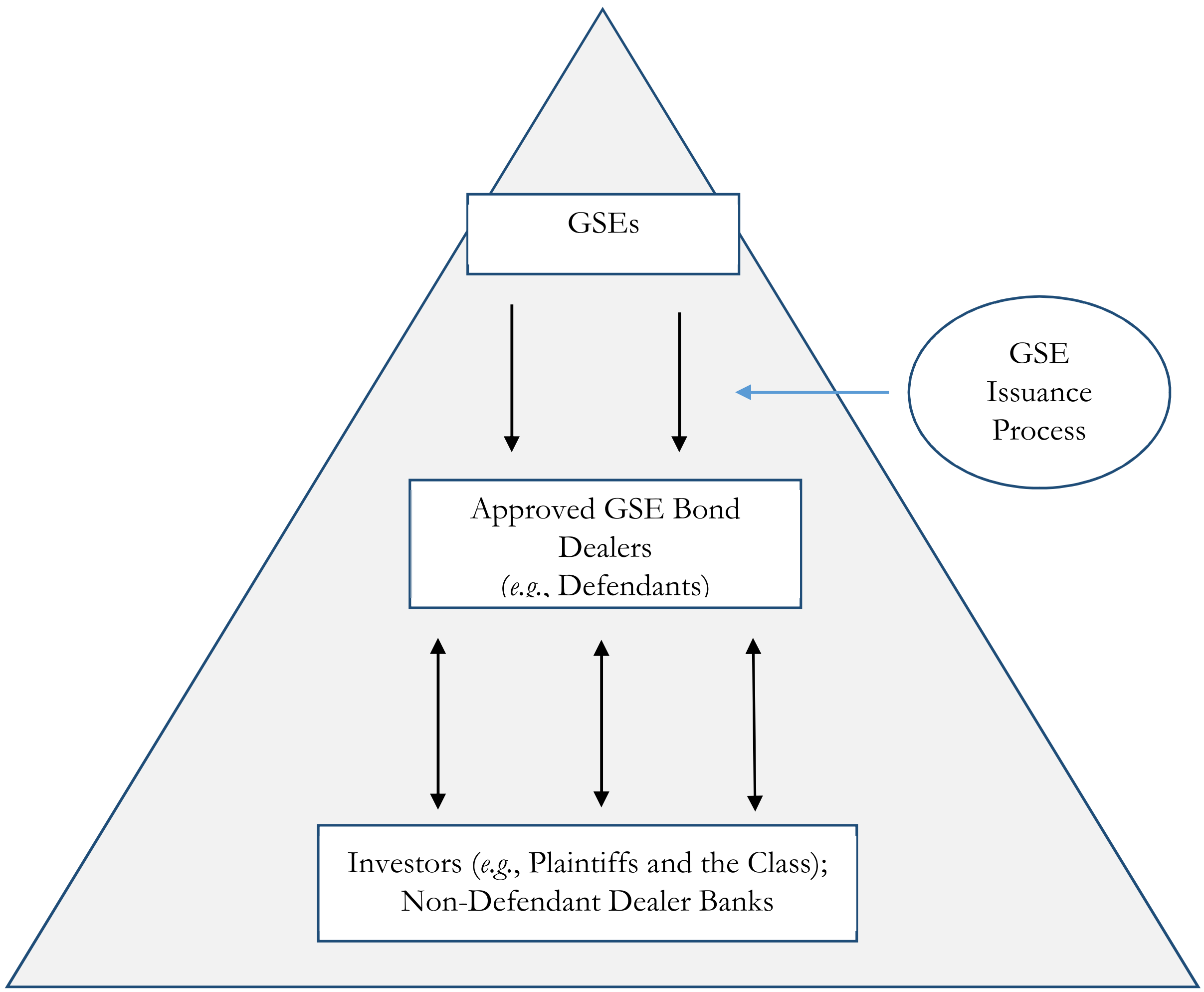
123. Fannie Mae, Freddie Mac, FHLB, and FFCB issue GSE Bonds through a pre-approved group of "Approved GSE Bond Dealers," including Defendants. Approved GSE Bond Dealers underwrite GSE Bonds issued by Fannie Mae, Freddie Mac, FHLB, and FFCB and profit from trading GSE Bonds with investors, such as Plaintiffs and the Class, in the secondary market.

124. Thus, the GSE Bond market is structured as a three-tiered pyramid with GSEs at the top, Approved GSE Bond Dealers in the middle, and investors like Plaintiffs and the Class at the bottom. Figure 1, below, illustrates the structure of the GSE Bond market. The black arrows represent GSE Bond supply. First, Fannie Mae, Freddie Mac, FHLB, and FFCB issue GSE Bonds

to Approved GSE Bond Dealers. Next, Approved GSE Bond Dealers trade GSE Bonds with investors like Plaintiffs and the Class.

FIGURE 1

THE STRUCTURE OF THE GSE BOND MARKET



125. GSEs select these Approved GSE Bond Dealers to underwrite new GSE Bonds in one of three ways: (1) by "mandate" in which the GSE requires a certain group of Approved GSE Bond Dealers to place a new bond; (2) by holding an "auction" where Approved GSE Bond Dealers bid for the right to take the new bond to market; or (3) in response to a "reverse inquiry" from Approved GSE Bond Dealers with demand for a specific kind of bond.

126. GSEs encourage Approved GSE Bond Dealers to participate in GSE Bond auctions by awarding "points" based on their level of activity. These points are reflected on a monthly "scorecard" circulated by each issuer. The more points an Approved GSE Bond Dealer accrues the more likely they are to be selected for mandates and given additional underwriting business from the GSEs.

127. GSE Bond auctions occurred at regularly scheduled intervals (*i.e.*, weekly, biweekly, or daily) throughout the Class Period. In each auction, Approved GSE Bond Dealers (often working together in a group called a "syndicate") submit proposals reflecting their plan for underwriting and bringing a new bond to market. This proposal will include certain details, such as the size of the offering and how it will be allocated among the Approved GSE Bond Dealers should they be selected. If a joint bid is successful, each of the winning Approved GSE Bond Dealers that is part of the syndicate receives an allocation of newly issued GSE Bonds.

128. Next, the newly issued GSE Bonds enter the "syndication" phase. In this phase, the Approved GSE Bond Dealers that won work together in the "primary market" to try and place the new GSE Bonds with a bulk buyer. These bulk buyers are typically regional banks that buy and hold GSE Bonds as an investment and do not sell them to other investors. During the syndication phase, the Approved GSE Bond Dealers are permitted to communicate with each other to effectuate the initial placement in the primary market. Exceptions are made to banks' usual policies prohibiting participation in multi-bank chat rooms to allow the traders working on a syndicate to easily communicate in real time.

129. Finally, the syndication phase ends when the Approved GSE Bond Dealers declare the new issuance "free-to-trade" often abbreviated as "FTT." Once this announcement occurs, secondary market trading begins, and the Approved GSE Bond Dealers that made up the syndicate

are supposed to compete against one another to sell the newly issued GSE Bonds to investors. The traders who participated in the GSE Bond auctions and primary market syndication are the same ones responsible for selling those GSE Bonds to investors in the secondary market after they are marked FTT.

130. Approved GSE Bond Dealers profit from participating in the GSE Issuance Process by acquiring GSE Bond inventory that they then sell to investors for profit. The GSE Bond Issuance Process concentrates GSE Bond supply among Defendants as the largest Approved GSE Bond Dealers.

131. Investors, like Plaintiffs, do not participate directly in the GSE Issuance Process. Instead, they typically transact with Approved GSE Bond Dealers to invest in GSE Bonds in the secondary market.

132. When investors like Plaintiffs have an investment need, they can reach out to a dealer electronically or by phone. A dealer will send back an offering page, which will list all of its bonds available for sale with pricing in dollar amounts. If a bond and its price fit the investment need, then the investor would engage the dealer to get a formal offering. If both parties confirm the terms of the transaction, settlement will occur the following day or on the scheduled date for new bond issues. The purchase is cleared through Fedwire. The investor does not obtain physical possession of the GSE Bonds; the trade simply results in an entry on the Federal Reserve's Book Entry system.

D. Defendants Controlled GSE Bond Supply

133. Defendants controlled the majority of GSE Bond supply because they purchased a large proportion of GSE Bonds through the GSE Issuance Process. As explained above, Approved GSE Bond Dealers that participate in a GSE Bond underwriting syndicate secure substantial

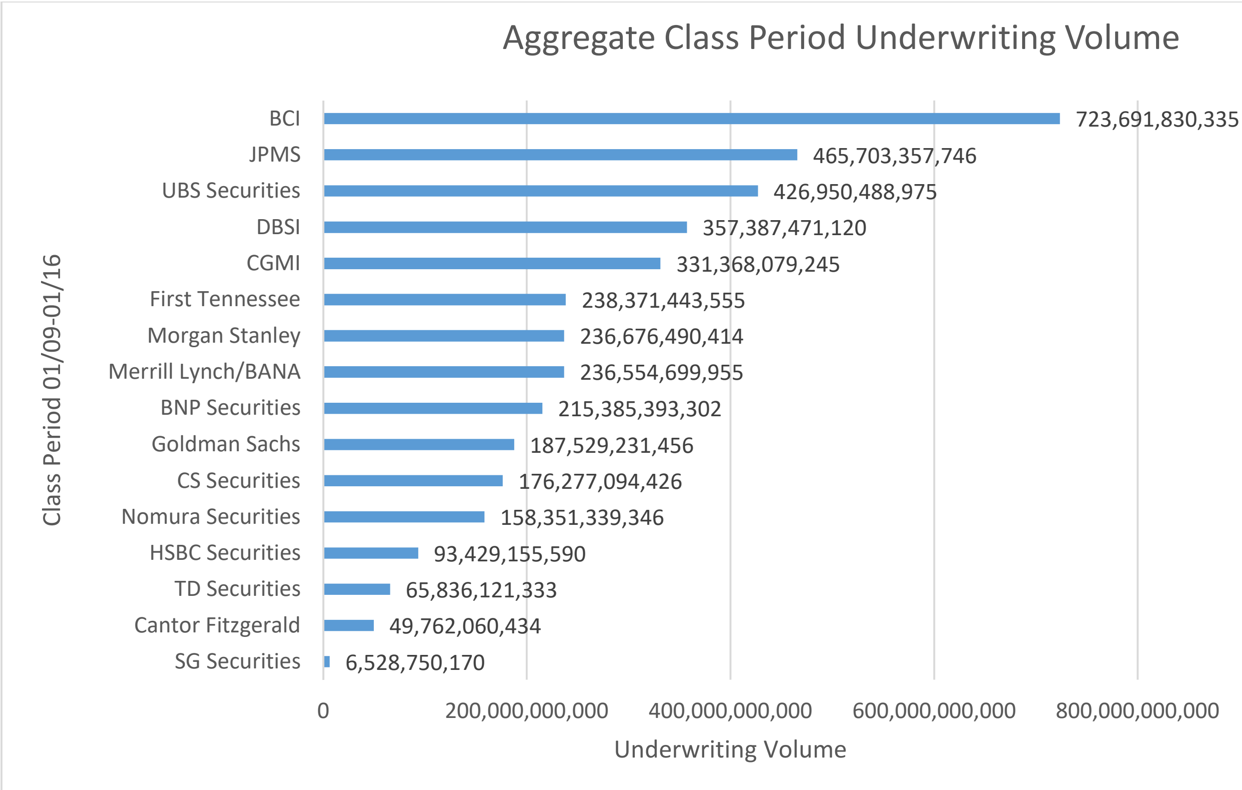
allocations of GSE Bond supply that they subsequently sell to investors. Accordingly, an Approved GSE Bond Dealer's share of GSE Bond underwriting correlates with the amount of GSE Bond inventory that the Approved GSE Bond Dealer can use to trade GSE Bonds with investors.

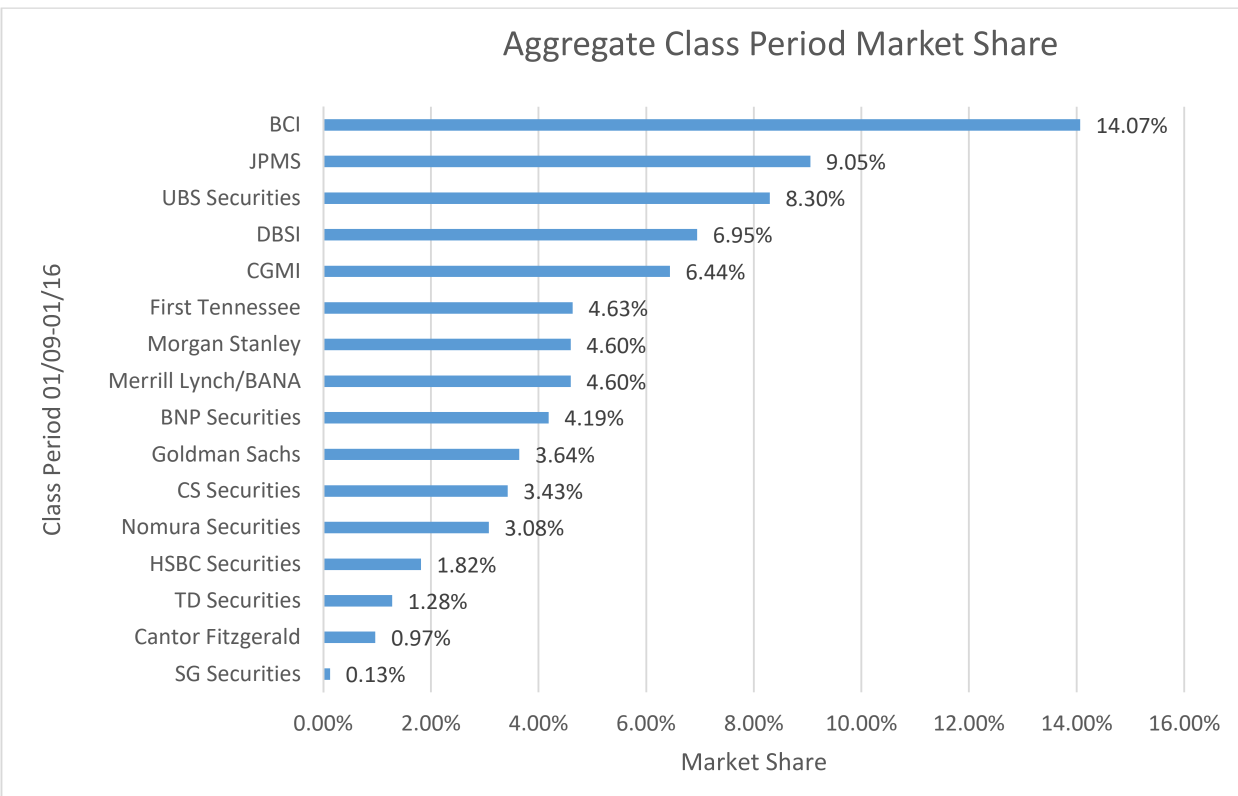
134. Defendants have consistently been among the largest GSE Bond underwriters in the United States, and underwrote billions of dollars in GSE Bonds during the Class Period. Thus, Defendants as a bloc dominated control of GSE Bond supply and were well-positioned to use that dominant position to fix the prices of GSE Bonds charged to Plaintiffs and the Class. The table and figures below demonstrate Defendants' market control:

TABLE 1

Share of GSE Bond Underwriting from January 1, 2009 through January 1, 2016

Dealer	**Aggregate Trading Volume During Class Period ($)**	**Average Market Share During Class Period**
BCI	723,691,830,335	14.07%
JPMS	465,703,357,746	9.05%
UBS Securities	426,950,488,975	8.30%
DBSI	357,387,471,120	6.95%
CGMI	331,368,079,245	6.44%
First Tennessee	238,371,443,555	4.63%
Morgan Stanley	236,676,490,414	4.60%
Merrill Lynch	236,554,699,955	4.60%
BNP Securities	215,385,393,302	4.19%
Goldman Sachs	187,529,231,456	3.64%
CS Securities	176,277,094,426	3.43%
Nomura Securities	158,351,339,346	3.08%
HSBC Securities	93,429,155,590	1.82%
TD Securities	65,836,121,333	1.28%
Cantor Fitzgerald	49,762,060,434	0.97%
SG Securities	6,528,750,170	0.13%
Total	**3,969,803,007,402**	**77.16%**


Aggregate Class Period Underwriting Volume
Class Period 01/09-01/16
BCI 723,691,830,335
JPMS 465,703,357,746
UBS Securities 426,950,488,975
DBSI 357,387,471,120
CGMI 331,368,079,245
First Tennessee 238,371,443,555
Morgan Stanley 236,676,490,414
Merrill Lynch/BANA 236,554,699,955
BNP Securities 215,385,393,302
Goldman Sachs 187,529,231,456
CS Securities 176,277,094,426
Nomura Securities 158,351,339,346
HSBC Securities 93,429,155,590
TD Securities 65,836,121,333
Cantor Fitzgerald 49,762,060,434
SG Securities 6,528,750,170
0
200,000,000,000
400,000,000,000
600,000,000,000
800,000,000,000
Underwriting Volume


Aggregate Class Period Market Share
Class Period 01/09-01/16
BCI 14.07%
JPMS 9.05%
UBS Securities 8.30%
DBSI 6.95%
CGMI 6.44%
First Tennessee 4.63%
Morgan Stanley 4.60%
Merrill Lynch/BANA 4.60%
BNP Securities 4.19%
Goldman Sachs 3.64%
CS Securities 3.43%
Nomura Securities 3.08%
HSBC Securities 1.82%
TD Securities 1.28%
Cantor Fitzgerald 0.97%
SG Securities 0.13%
0.00%
2.00%
4.00%
6.00%
8.00%
10.00%
12.00%
14.00%
16.00%
Market Share

135. This high degree of concentration in the GSE Issuance Process gave Defendants substantial control over the GSE Bond supply available to investors in the secondary market. It also gave Defendants the ability to fix the prices that investors paid for GSE Bonds, and the motive and opportunity to fix GSE Bond prices to generate enormous GSE Bond trading profits.

E. GSE Bond Pricing

136. The market price of a GSE Bond at any given time is calculated by comparing the yield to maturity offered by the GSE Bond with the yield offered by other similar debt instruments. Investors and dealers in the GSE Bond market often use U.S. Treasury securities as a comparison to determine GSE Bond prices because U.S. Treasury securities are widely viewed as the lowest risk, most actively traded debt securities available to investors.

137. Interest rates and bond prices have an inverse relationship. As interest rates increase, the prices of GSE Bonds decrease to reflect the fact that an investor can earn a greater amount of interest by purchasing a new debt instrument at the higher prevailing interest rate. Conversely, as interest rates decrease, the prices of existing GSE Bonds increase to reflect the fact that the amount of interest offered by the existing GSE Bond is greater than the amount of interest an investor could earn by purchasing a new debt instrument at the prevailing interest rate.

138. GSE Bonds are OTC debt. Generally, employees at a trading desk within the Approved GSE Bond Dealer's GSE Bond business are responsible for determining GSE Bond price quotes offered to investors. The Approved GSE Bond Dealer sends the price quote to the investor without disseminating the price quote to the investing public. Despite the vast size of the market, trades are typically conducted over the phone or by message, person to person.

139. Defendants profit by selling GSE Bond inventory to customers at higher prices than they paid in either the primary or secondary markets. Approved GSE Bond Dealers profit from trading GSE Bonds with investors by keeping the difference between the price that the Approved

GSE Bond Dealer pays to purchase a GSE Bond and the price at which the Approved GSE Bond Dealer sells a GSE Bond to a customer. This difference is called the "bid-ask spread."

140. The bid price indicates the price at which the dealer is willing to buy a given GSE Bond from a customer, and the ask price represents the price at which a dealer is willing to sell the same GSE Bond to that customer. By buying at a lower price and selling at a higher price, Defendants profit off of the difference. The wider the bid-ask spread, the greater the profit for the Defendant in a GSE Bond transaction and the higher the cost for the customer.

141. For example, a Defendant might quote a bid-ask spread of $99.90/$100.10 for a given GSE Bond. $99.90 is the bid price, or the price at which the Defendant is willing to purchase the GSE Bond from the customer, and $100.10 is the ask price, or the price that the Defendant is willing to accept for selling the GSE Bond. The bid-ask spread in this example is $.20.

142. One factor that determines bid-ask spreads is transaction volume, also known as "liquidity." Bid-ask spreads have an inverse relationship to liquidity in the market. As liquidity increases, bid-ask spreads become narrower to reflect the lower risk that the dealer will be forced to carry the GSE Bond while searching for a buyer, exposing the dealer to losses arising from changing financial conditions such as a credit downgrade to a GSE or a change in prevailing interest rates. In competitive OTC bond markets, liquidity is such a strong determinant of the bid-ask spread that it is often used as a "proxy" used to measure bond market liquidity.

143. In competitive OTC bond markets, dealers compete against each other by offering superior prices to customers in order to secure business. Competition keeps bid-ask spreads within a relatively narrow range, since any dealer that unilaterally quotes inferior prices to customers will lose business to competitors.

II. DEFENDANTS CONSPIRED TO FIX GSE BOND PRICES CHARGED TO INVESTORS

A. Direct Evidence Shows that Defendants Agreed to Fix Prices for Newly Issued GSE Bonds After Auctions

144. As explained in Part I.C., above, Approved GSE Bond Dealers that acquire GSE Bonds from auctions are supposed to compete to sell the newly issued GSE Bonds to investors in the secondary market after the close of the syndication phase.

145. Direct evidence provided by the cooperating co-conspirator shows that this is not what occurred during the Class Period. Rather, Defendants conspired to fix the price at which GSE Bonds were FTT in the secondary market at supracompetitive levels. The economic evidence of collusion described below is consistent with this evidence.

146. This misconduct occurred regularly from at least as early as August 2009 through at least January 2016. The cooperating co-conspirator directly implicated numerous Approved GSE Bond Dealers in this misconduct, including Defendants DBSI, Merrill Lynch, BNP Securities, JPM Securities, Morgan Stanley, Goldman Sachs, Nomura, HSBC, Cantor Fitzgerald, SG Securities, TD Securities, FTN Financial, CS Securities, UBS Securities, BCI, and CGMI.

147. For example, on February 13, 2012, MS&Co., DBSI, and BNP Securities submitted a winning joint bid in a GSE Bond auction conducted by FHLB. BNP Securities and DBSI received allocations of $167 million each,[3] while Morgan Stanley received $166 million. By February 17, 2012, MS & Co., DBSI, and BNP Securities had placed approximately $67 million, $17 million, and $26 million respectively during the syndication process, leaving these dealers with approximately $390 million of newly issued GSE Bonds to sell to investors in the secondary market.

[3] Bond amounts are listed in terms of "par" value in this section.

148. Prior to selling those bonds in the secondary market, on February 17, 2012, MS & Co., DBSI, and BNP Securities expressly agreed in an online multi-bank chat room to declare these bonds FTT at a supracompetitive fixed price of $99.985:

February 17, 2012

DBSI Trader 1: How are you guys doing? We have 100mm left

Morgan Stanley Trader: 150mm left

BNP Securities Trader: I'd say free it up given the cheapening trend of FHLB

BNP Securities Trader: $140mm left

Morgan Stanley Trader: I just **don't want to create a race to the bottom** between the 3 of us, doesn't help anyone.

DBSI Trader 1: ugh this thing is a pig

DBSI Trader 1: ok I'm fine FTT

BNP Securities Trader: I agree, but also don't want to see spreads gap out, FHLB widen, and see a .50 in 2Y space

DBSI Trader 1: go out FTT 99.985?

Morgan Stanley Trader: Sure FTT at 99.985

BNP Securities Trader: Good by me.

149. In another example from September 18, 2013, Goldman Sachs and DBSI submitted a winning joint bid in an auction held by FHLB. Each received allocations of $12.5 million. Goldman Sachs and DBSI placed approximately $150,000 of these GSE Bonds during syndication, leaving approximately $24.85 million left for these dealers to sell in the secondary market. Goldman Sachs and DBSI agreed, prior to selling GSE Bonds newly issued by FHLB in the secondary market, to fix the FTT price for those bonds at $99.925:

September 18, 2013

Goldman Sachs Trader: Winner

Goldman Sachs Trader: I'm calling for cover

DBSI Trader: Ill asnd

DBSI Trader: 1.05 with .80

Goldman Sachs Trader: Topeka.

Goldman Sachs Trader: I got asnd queued up

Goldman Sachs Trader: I just need CUSIP.

DBSI Trader: Ok cool

DBSI Trader: **FTT 99.90?**

Goldman Sachs Trader: On nim2

Goldman Sachs Trader: **Lets just go 99.925.**

150. The direct evidence provided by the cooperating co-conspirator also shows that Defendants continued to communicate in real-time using multi-bank chat rooms after agreeing to fix the FTT price to ensure GSE Bond prices remained artificially high. In the example below, BNP Securities, DBSI, Goldman Sachs, and Merrill Lynch submitted a winning joint bid in a GSE Bond auction conducted by FFCB. BNP Securities, DBSI, and Goldman Sachs received allocations of $69 million each, while Merrill Lynch received $68 million. By July 16, 2012, these Defendants had placed approximately $87.25 million during the syndication process, leaving $187.75 million of newly issued GSE Bonds to sell to investors in the secondary market. In the chat below, a trader from Merrill Lynch references these Defendants' agreement from July 16, 2012 to fix the FTT price at $99.875. The following day, traders from DBSI, Merrill Lynch, Goldman Sachs, and BNP Securities continued to communicate to maintain artificially inflated prices:

July 17, 2012

DBSI Trader: 99.985 on the FFCB's?

BNP Securities Trader: Sounds good here.

DBSI Trader: We have FHLB 0.72's (4nc3m, Amer), slightly longer settle, that we're showing at 99.85.

Merrill Lynch Trader: [O]K I might be a touch higher than u guys but def[initely] not
going lower. **We were 99.875 yesterday right**?

DBSI Trader: correct.

Merrill Lynch Trader: cool.

DBSI Trader: You guys all cool w/ that?

BNP Securities Trader: We made a client sale on the 2.25s this a.m. at 99.75 with 10s at 10.

Merrill Lynch Trader: Yes sir.

BNP Securities Trader: Our live mark right now is 99.66.

DBSI Trader: I know we're FTT, and anyone can hit any bid, **but given that it's day #2 w/ these bonds, figure maybe we at least try and stay on the same page** (especially the 3yr). . .less volatile.

BNP Securities Trader: too cheap?

DBSI Trader: i buy them

Goldman Sachs Trader: if we are free to trade, we cannot talk about prices

DBSI Trader: ok. Fair enough. Just don't want anyone getting annoyed if someone hits a bi[d].

151. These examples of chats show that Defendants were motivated to agree on a fixed price for newly issued GSE Bonds so that they could secure higher profits, represented by the difference between the price that Defendants paid for GSE Bonds in auctions and the price at which Defendants sold GSE Bonds to investors. Agreeing to inflate prices for these GSE Bonds allowed

Defendants to both lock in low-risk profits by reselling newly issued GSE Bonds for a quick profit and to protect GSE Bonds that they held in inventory from declining in value.

152. For example, on August 31, 2011, BNP Securities, Cantor Fitzgerald, and DBSI submitted a winning joint bid in a GSE Bond auction conducted by FFCB. BNP Securities and DBSI received allocations of $165 million each, while Cantor Fitzgerald received an allocation of $50 million. By September 1, 2011, these Defendants had placed approximately $200.2 million during the syndication process, leaving these dealers with approximately $179.8 million of newly issued GSE Bonds to sell to investors in the secondary market. Recognizing that the value of their inventory was declining, traders from DBSI, BNP Securities, and Cantor Fitzgerald agree in the chat below to fix the FTT price artificially higher at $99.925, above where they could sell the bonds during syndication:

September 1, 2011

DBSI Trader: Are we still in synd[ication] on the stepper [*i.e.* a type of bond]?

BNP Securities Trader: Id say so. And the .47s. CF [Cantor Fitzgerald] is out of those.

DBSI Trader: Want to go FTT on the 0.47's? Ok so stay in synd[ication] less .25 on the 3yr step [a type of bond].

BNP Securities Trader: I was thinking give it a couple hours this morning. You know I make par sales all day.

DBSI Trader: You really think you're going to make some par sales?

BNP Securities: Prob right ... 99.925?

DBSI Trader: Given our phenomenal distribution to end acc[oun]ts w/ $1.25 in a 2yr bond… we have 2 options: 1) Sell bonds to regionals at 99.90 (less 1.00) OR 2) Sell bonds to regionals at 99.925 FTT.

DBSI Trader: This way we make .50 instead of .25 :)

BNP Securities Trader: Well argued

BNP Securities Trader: I go #2

BNP Securities Trader: FTT.

153. Defendants' anticompetitive practice of agreeing to fix the FTT price for newly issued GSE Bonds was pervasive and affected the prices of GSE Bonds throughout the Class Period. This includes GSE Bonds that Plaintiffs transacted directly with Defendants during the Class Period. *See* Part III, below.

154. In the absence of a conspiracy, no single dealer would be able to unilaterally maintain prices for GSE Bonds above a competitive level for a significant period of time without losing business to its competitors.

B. The DOJ Is Conducting a Criminal Price-Fixing Investigation into the GSE Bond Market

155. On June 1, 2018, *Bloomberg* reported that four confidential sources revealed that the DOJ is conducting a criminal investigation into collusion among dealers to fix prices for bonds issued by Fannie Mae and Freddie Mac.

156. These confidential sources revealed that the investigation concerns the prices that dealers in the market for Fannie Mae and Freddie Mac bonds charged to investors, such as Plaintiffs and the Class. Specifically, the investigation focuses on illegal activities of bank traders suspected of coordinating in the secondary market to benefit the institutions they work for.

157. Though the *Bloomberg* report only revealed the existence of a DOJ investigation as to two GSEs – Fannie Mae and Freddie Mac – direct evidence provided by the cooperating co-conspirator described herein, as well as recent public filings, show that the investigation goes beyond that. For example, BNP Paribas disclosed in its annual financial report filed on March 5, 2019, that it was being investigated by "US regulatory and law enforcement authorities" for its

conduct in the market for "US Agency bonds," which is synonymous with GSE Bonds – in addition to U.S. Treasury securities.

C. Features of the GSE Bond Market Fostered Collusion Among Defendants

158. In addition to the above-cited direct evidence of conspiracy, circumstantial evidence, sometimes referred to as "plus factors," further support an inference of collusion.

1. The GSE Issuance Process Put Horizontal Competitors Together in Private Chats

159. The very nature of how GSE Bonds come to be sold in the secondary market facilitated Defendants' anticompetitive scheme.

160. As explained above, GSEs can award Approved GSE Bond Dealers the right to underwrite and syndicate GSE Bonds through an auction process that allows for groups of Approved GSE Bond Dealers to submit joint bids. After the auction is held, the winning group of Approved GSE Bond Dealers are permitted to communicate with each other about GSE Bonds to facilitate their placement in the primary market. However, this communication among members of the syndicate is supposed to end once the GSE Bonds are designated FTT in the secondary market.

161. Defendants did not have systems and controls in place to prevent communication among syndicate members after secondary market trading began during the Class Period (or to prevent communications during the syndication phase about prices that would be maintained once secondary market trading began). In fact, Defendants' business practices facilitated such continued communication by placing the same traders involved in the GSE Issuance Process in charge of trading GSE Bonds in the secondary market after they were FTT.

162. In particular, because Defendants could communicate freely with one another during the underwriting and syndication of GSE Bonds, they were able to use those lines of communication to enter into illegal agreements about pricing once the bonds were FTT in the

secondary market. Instead of letting the competitive forces of the market dictate the pricing of the GSE Bonds, Defendants agreed not to compete so as to prevent a "race to the bottom."

163. Defendants also used their electronic group chat rooms, namely, a program called Instant Bloomberg, to maintain their collusive price-fixing scheme and coordinate in real time to share proprietary customer information and align their pricing throughout the life of a GSE Bond.

164. In the secondary market, customers typically contact only a limited number of dealers before transacting. Furthermore, the time required to navigate the OTC process provides dealers with the opportunity to communicate and collude with one another before an order is executed.

165. These secret communications enabled Defendants to communicate continuously and to inform each other of inventories, positions, customers, and pricing. By sharing information regarding customer strategies and positions, Defendants necessarily gave themselves an informational advantage to the detriment of investors. It is well recognized in the financial literature that the improper sharing of information among dealers regarding customer inventories, trading positions, and strategies causes customers to receive worse terms of trade.

2. The Revolving Door and Social Nature of the Market

166. The GSE Bond traders and sales personnel at Defendants' respective offices had well-established relationships, sometimes dating back to prior overlapping employment. They worked together regularly, over an extended period of time, as a small group of traders and salespeople operating in the same markets. Defendants' GSE Bond traders and sales personnel were well-acquainted with each other and had pre-existing relationships based on time spent working together within one of the Defendant's GSE Bond business.

167. During the Class Period, employees on GSE Bond desks moved fluidly among positions at the various banks. The revolving doors fostered relationships with the traders among

the horizontal competitors that facilitated familiarity which allowed them to discuss and agree upon pricing in the secondary market and trust that all the parties would go along with the agreement.

168. These traders also routinely gathered for social and industry events at which they were able to freely discuss sensitive market information and the coordinate trading activities.

169. For example, GSE Bond traders regularly met and socialized at an event organized by an executive of FFCB called "Tips for Parkinson's." At this annual event, the GSE traders served as bartenders competing against each other for tips.

170. Participants in the GSE Bond market also attended and socialized at the Government Investment Officers Association conferences in Las Vegas, Nevada.

171. Interdealer brokers would regularly take GSE Bond traders from different banks for dinners, sporting events, and other group engagements where they could have communicated about pricing, agreements, and trading activities.

3. The GSEs and Market Conditions Fostered Such Behavior

172. The GSEs monitored Defendants' performance in the secondary market and awarded underwriting privileges based in part on success in the secondary market. This connection between the underwriting process and the secondary market gave Defendants a motive to conspire to raise and fix prices in the secondary market.

173. GSE Bonds grew in popularity following the financial crisis in the United States. This was largely due to the pressure from investors to invest in "safe" instruments and to reduce risk following losses in 2008 and 2009. For instance, a growing number of U.S. investors (pension funds, insurance companies, etc.) turned to GSE Bonds to meet safety requirements in bylaws or investment guidelines following the collapse. At the same time, GSE Bond dealers were under enormous pressure to generate profit while the federal government mandated that GSEs reduce the debt on their books after the 2008 financial crisis. The reduction in issuances meant less profit

opportunity for the dealer banks, giving them further incentive to collude to reduce competition in the already shrinking market.

174. The structure of the market is such that the awarding of underwriting services for a primary issuance (a highly lucrative position) is based on volume in the secondary market. GSEs circulate monthly "scorecards." Scorecard rankings then dictate which dealers will be rewarded with "mandates" for more underwriting business, resulting in additional fees for the dealers. In an efficiently functioning market, the desire to maintain volume in the secondary market so as to be awarded a role in the primary issuance would incentivize any single dealer to put downward pressure on prices and compete against others. By agreeing to fix secondary prices, however, Defendants ensured that they could all maintain sufficient volume of sales to be awarded roles in the primary issuance without having to undercut each other on price in the secondary market so as to maintain that volume.

175. Further, employees on Defendants' GSE Bond desks were motivated to increase profits at all costs because their compensation was tied to profit in that they were compensated based on how much profit they attained. Price fixing was thus a means by which the dealers sought to increase revenues and therefore their compensation.

4. Concentration and High Barriers to Entry

176. There is a high level of industry concentration in the GSE Bond market. Defendants are a relatively small number of competitors who controlled the supply of GSE Bonds available to investors through their dominant share in the GSE Issuance Process.

177. There are high barriers to entry into the GSE Bond market. It is expensive to become an Approved GSE Bond Dealer, and few banks can bear the costs and risks associated with carrying sufficient GSE Bond inventory to serve as a dealer in the GSE Bond market. As explained above in Part I, changes in prevailing interest rates and other factors can affect the value of GSE

Bonds held in a dealer's inventory, limiting the ability of smaller players to engage in large GSE Bond trades or hold GSE Bond inventory. The Bank for International Settlements, a policy and research organization owned by 60 of the world's leading central banks, explained that barriers to entry for prospective dealers in OTC markets like the GSE Bond market include: "a sufficiently large client base to get a good view of the flow of orders; the capacity to take on large principal positions; continuous access to multiple markets, including funding and hedging markets; the ability to manage risk, especially the risk of holding assets in inventory; and market expertise in providing competitive quotes for a range of securities."

178. These barriers to entry prevented non-cartel members from competing with Defendants' cartel on equal terms and luring customers by offering superior prices.

D. Analysis of GSE Prices and Other Economic Data Is Consistent with the Existence of Defendants' Conspiracy

179. Plaintiffs examined GSE Bond prices during the Class Period in numerous ways. The resulting analyses of GSE Bond prices throughout the Class Period are consistent with a price-fixing conspiracy that successfully inflated the prices that investors paid when buying GSE Bonds and deflated the prices investors received when selling GSE Bonds throughout the Class Period.

180. Consistent with the focus of the DOJ's investigation and the information provided by the cooperating co-conspirator, economic analysis uncovered statistically significant (with a confidence degree of 95%)[4] anomalies in GSE Bond pricing that are inconsistent with normal, competitive market conditions. Specifically, the economic facts are consistent with the information obtained from the cooperating co-conspirator in that they show that Defendants' conspiracy to fix the prices of newly issued GSE Bonds immediately following each GSE Bond issuance resulted in

[4] Statistical significance means that the results are at least 95% likely to have been caused by factors other than chance or coincidence.

artificially higher prices. Furthermore, the economic facts show that Defendants fixed the prices for on-the-run GSE Bonds artificially higher in the period leading up to a new GSE Bond issuance to support this price inflation. As further evidence of the conspiracy, the economic analyses demonstrate that the bid-ask spreads were artificially inflated throughout the Class Period on all GSE Bond transactions with investors.

181. For each of these analyses, the GSE Bond prices charged by Defendants were anomalous during the Class Period as compared to the period after January 1, 2016.

1. Defendants Fixed the Prices of Newly Issued GSE Bonds

182. Plaintiffs obtained and examined the prices that Defendants charged investors for newly issued GSE Bonds soon after GSE Bond issuances when Defendants had new GSE Bond inventory to sell. What is observed are anomalous pricing patterns that show inflated prices for newly issued GSE Bonds. This caused investors like Plaintiffs and the Class to overpay for GSE Bonds.

183. First, Plaintiffs examined data to observe the difference between the price that Defendants paid to purchase GSE Bonds from GSEs and the price that Defendants then charged to investors for these same GSE Bonds.

184. In a competitive market, this difference should be especially small for Defendants' sales of newly issued GSE Bonds made on the same day that GSEs issued the GSE Bonds ("offer days"). For these sales, only a short amount of time has passed (*i.e.*, less than one day) between the time when the Defendant purchased the GSE Bond from the GSEs and the time when it sells the same GSE Bond to an investor. Thus, the impact of new information, such as changes in prevailing interest rates, the GSE's creditworthiness, or liquidity, is near zero.[5] Moreover, the secondary

[5] For an explanation of how such information impacts GSE Bond pricing, *see* Part I, above.

market for these on-the-run bonds is highly liquid, further implying that the price differential paid to Defendants should be quite small.

185. Plaintiffs obtained pricing data for GSE Benchmark and Reference Notes (collectively, the "Notes"). The Notes are among the most traded GSE Bonds, accounting for over 2.5 million transactions from March 1, 2010 through December 31, 2017.[6] Defendants participated in underwriting 78.6% of these instruments from March 1, 2010 through January 1, 2016.

186. Plaintiffs observed the average difference between the price that Approved GSE Bond Dealers paid to GSEs for Notes and the price at which Approved GSE Bond Dealers sold these Notes to investors on offer days from January 1, 2016 through December 31, 2017 (*i.e.*, after the Class Period). This difference was very small after the Class Period, averaging 1.2 basis points[7] (represented by the blue bar in Figure 2, below).

187. Next, Plaintiffs observed the average difference between the price that Approved GSE Bond Dealers paid to GSEs for Notes and the prices at which Approved GSE Bond Dealers sold these newly issued Notes to investors on offer days before January 1, 2016 (*i.e.*, during the Class Period). This difference was 10.6 basis points (represented by the red bar in Figure 2, below).

188. Thus, the price that Defendants charged investors for newly issued Notes on offer days were ***nine times higher*** before January 1, 2016 than after. These results are anomalous. The substantial decrease in the prices of newly issued Notes after the Class Period would not have been observed in a competitive market.

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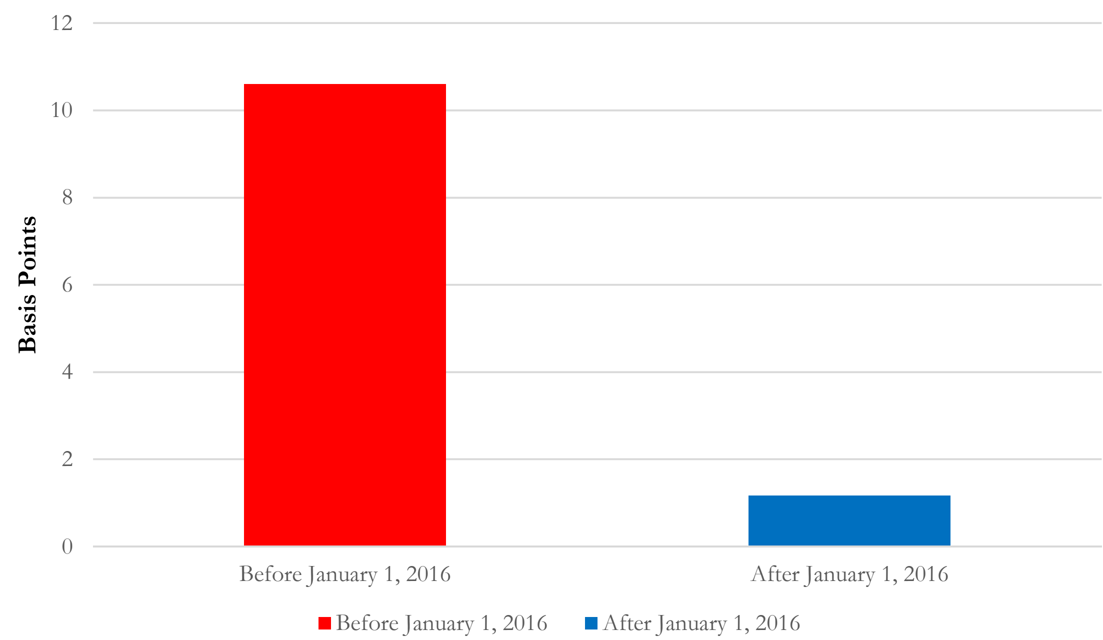
6 Data for this analysis is first available as of March 1, 2010, when reporting to TRACE became mandatory.

7 The term "basis point" is used to compare price and yield. Each percentage point is divided into 100 basis points, or "bp." A basis point therefore refers to 1/100th of one percent. As an example, the difference between an interest rate yield of 6% and 6.12% is 12 bp.

189. Figure 2, below, illustrates the results of this analysis. The horizontal line marked "0" is the baseline. It represents the price that the Approved GSE Bond Dealers paid to purchase Notes from GSEs. The vertical axis is the difference between the price that the Approved GSE Bond Dealer paid the GSEs for the Notes and the price that the Approved GSE Bond Dealer charged to investors for these same Notes on offer days. As Figure 2 illustrates, this difference was much higher during the Class Period, indicating that Defendants colluded to charge higher prices to investors for newly issued GSE Bonds during the Class Period.

Figure 2

Price Increase Charged to Investors for Newly Issued Notes



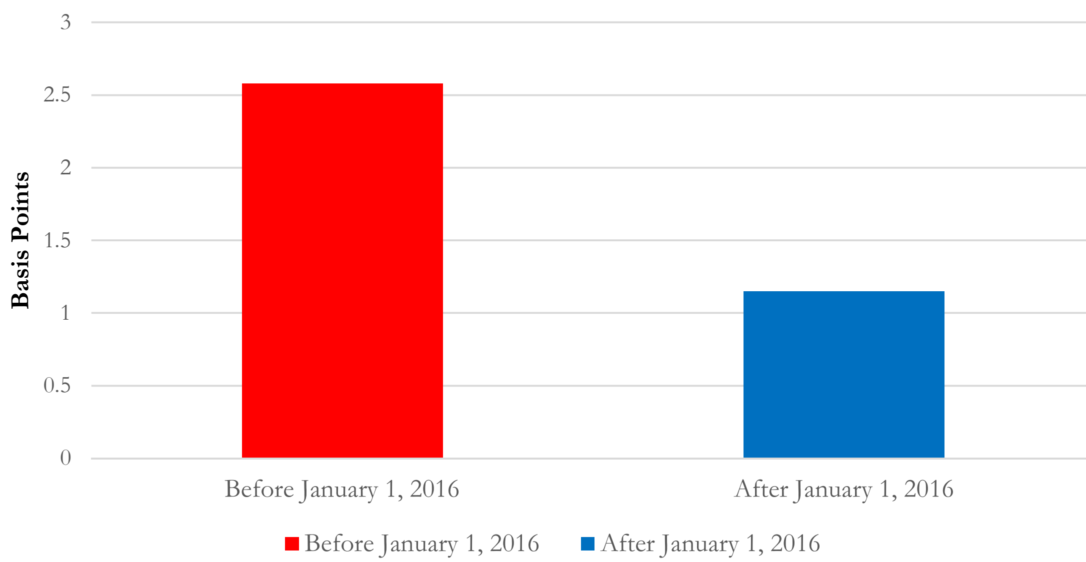
190. Plaintiffs' analysis also demonstrates that the price inflation for newly issued GSE Bonds persisted for a minimum of one week after offer days.

191. With regard to all GSE Bonds issued after March 1, 2010, this analysis showed that each Defendant charged significantly higher prices for newly issued GSE Bonds it sold to investors during the Class Period compared to after January 1, 2016.

192. This observation is summarized in Figure 3, below. The horizontal line marked "0" is the baseline. It represents the prices that Defendants paid to GSEs to purchase the newly issued GSE Bonds that they underwrote. The vertical axis represents the increase in price above the baseline that the Defendants charged to investors for the same newly issued GSE Bonds on offer days. The red bar represents this increase from March 1, 2010 through January 1, 2016, and the blue bar represents this increase from January 2, 2016 through December 31, 2017.

Figure 3

Prices Charged by Defendants for All Newly Issued GSE Bonds that they Underwrote on Offer Days



193. The data displayed in Figure 3 is not reflective of a competitive market and instead demonstrates that the prices of newly issued GSE Bonds that Defendants underwrote were artificially inflated from at least March 1, 2010 through January 1, 2016, which is represented by the red bar on the left. The blue bar shows that this increase in price was only 1.15 basis points

from January 2, 2016 through December 31, 2017.[8] However, the red bar shows that this increase was on average 2.58 basis points from March 1, 2010 through January 1, 2016, ***more than two times higher than the blue bar***.

194. In addition, an increase is observed in prices that Defendants charged for newly issued GSE Bonds relative to the yields offered by U.S. Treasury securities with comparable maturities. U.S. Treasury securities carry a similar amount of credit risk as GSE Bonds.

195. Prices of U.S. Treasury securities are affected by the same macroeconomic factors and market conditions as GSE Bonds. For example, changes in the credit condition of the U.S. federal government and prevailing interest affect GSE Bonds and U.S. Treasury securities similarly.

196. For each GSE Bond issuance, Plaintiffs compared the difference between the price that each Defendant charged to investors for newly issued GSE Bonds and the price that the same Approved GSE Bond Dealer charged to investors for newly issued U.S. Treasury securities of a comparable maturity. For example, Plaintiffs compared the price that Defendants charged investors for newly issued GSE Bonds with five-year maturities to the yields offered by comparable five-year U.S. Treasury Notes, and compared the prices that Defendants charged investors for newly issued GSE Bonds with 10-year maturities to the comparable newly issued 10-year U.S. Treasury Notes, etc. Plaintiffs repeated this process for GSE Bonds and U.S. Treasury securities with maturities from one year through 10 years.

197. Plaintiffs' analysis shows that the inflated prices that Defendants charged for newly issued GSE Bonds on offer days was highly abnormal as compared to the yields offered by U.S. Treasury securities of comparable maturities.

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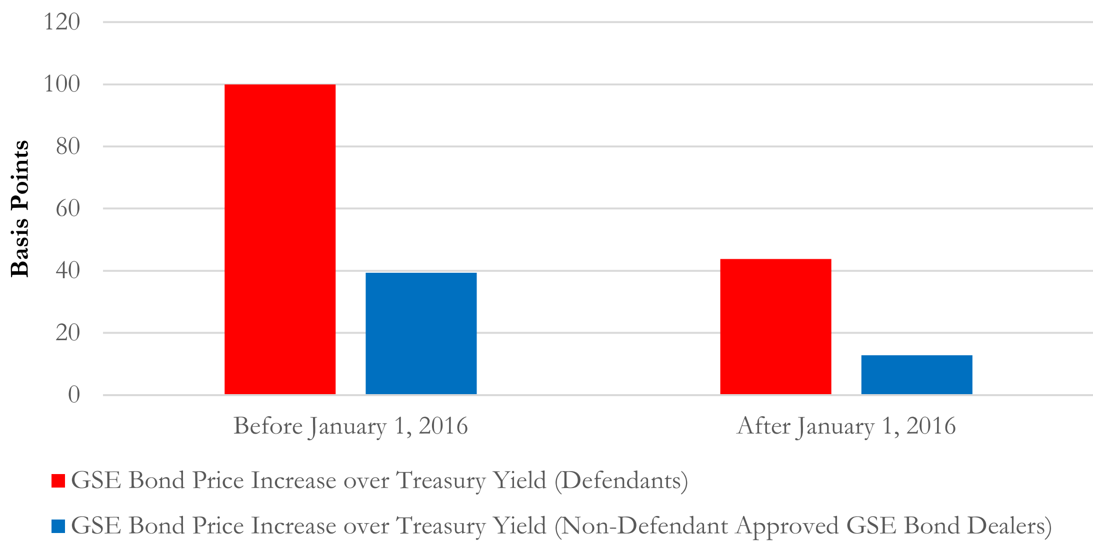
[8] The term "basis point" is used to compare price and yield. Each percentage point is divided into 100 basis points, or "bp." A basis point therefore refers to 1/100th of one percent. As an example, the difference between an interest rate yield of 6% and 6.12% is 12 bp.

Figure 4
Price Inflation for Newly Issued GSE Bonds Above Treasury Yields



198. In Figure 4, the vertical axis represents the difference between: (1) the increase in price that an Approved GSE Bond Dealer charged to investors for newly issued GSE Bonds over the price that the Approved GSE Bond Dealer paid to purchase the GSE Bonds from the issuer; and (2) the yield offered by U.S. Treasury securities with a comparable maturity. The baseline, marked "0," indicates the point where this difference is zero (*i.e.*, where the increase in price that an Approved GSE Bond Dealer charged to investors for newly issued GSE Bonds is equal to the yield offered by U.S. Treasury securities of a comparable maturity). The red bars represent this difference for Defendants, and the blue bars represent this difference for non-Defendant Approved GSE Bond Dealers. The column on the left shows the difference prior to January 1, 2016, and the column on the right shows the difference after January 1, 2016.

199. This analysis shows that the prices that Defendants charged for newly issued GSE Bonds that they underwrote prior to January 1, 2016 were not explained by macroeconomic factors or conditions in bond markets generally.

2. Defendants Fixed the Prices of the Previously Issued GSE Bonds Just Before They Went "Off-the-Run" to Create an Artificial Benchmark

200. As explained in Part I, above, GSEs typically issue GSE Bonds following a predictable, regular schedule. Newly issued GSE Bonds of a given type are referred to as "on-the-run," and generally have similar features to existing "off-the-run" GSE Bonds except that they mature at a later date. The most recent off-the-run bonds are used a benchmark when pricing new issuances. Thus, the prices of new "on-the-run" GSE Bonds are closely correlated with the prices of "off-the-run" GSE Bonds with similar characteristics that have been previously issued.

201. This correlation between the prices of off-the-run and on-the-run GSE Bonds with comparable features created an opportunity for Defendants' conspiracy to artificially increase the price of newly issued GSE Bonds by inflating the market price of GSE Bonds with similar features that were about to go "off-the-run."

202. The newly auctioned bond is priced off the formerly on-the-run bond. Higher prices for the formerly on-the-run bond would increase prices for the newly issued, replacement bond since the formerly on-the-run bond is used as a benchmark in pricing a new issue. Therefore, inflated on-the-run bond prices on the day before they go off-the-run benefit underwriting dealers by increasing the price of the newly auction bond.

203. For example, because most recent off-the-run bond is used as a benchmark to price new issuances, inflating the price of the relevant off-the-run bond would increase prices for the newly issued, replacement bond. Therefore, inflated on-the-run bond prices on the day before they go off-the-run benefit underwriting dealers by increasing the price of the newly auction bond.

204. Plaintiffs found evidence that this occurred during the Class Period. Specifically, Plaintiffs found that GSE Bonds about to go off-the-run consistently experienced a statistically significant price increase in the two days immediately leading up to a new issuance. This is the opposite of what is expected in a competitive market where demand for (and therefore the price of) GSE Bonds about to go off-the-run should be relatively low in the days leading up to a new issuance of GSE Bonds with similar features because investors would prefer to purchase on-the-run GSE Bonds from the new issuance. This is because the market for on-the-run GSE Bonds is generally more liquid (*i.e.*, larger transaction volume) than the market for off-the-run GSE Bonds. Investors prefer to invest in more liquid GSE Bonds because an investor has a higher likelihood of finding a buyer for these instruments at the market price should the investor decide to sell. Because demand is higher for on-the-run GSE Bonds than for off-the-run GSE Bonds, prices of on-the-run GSE Bonds are generally higher and yields are lower.[9]

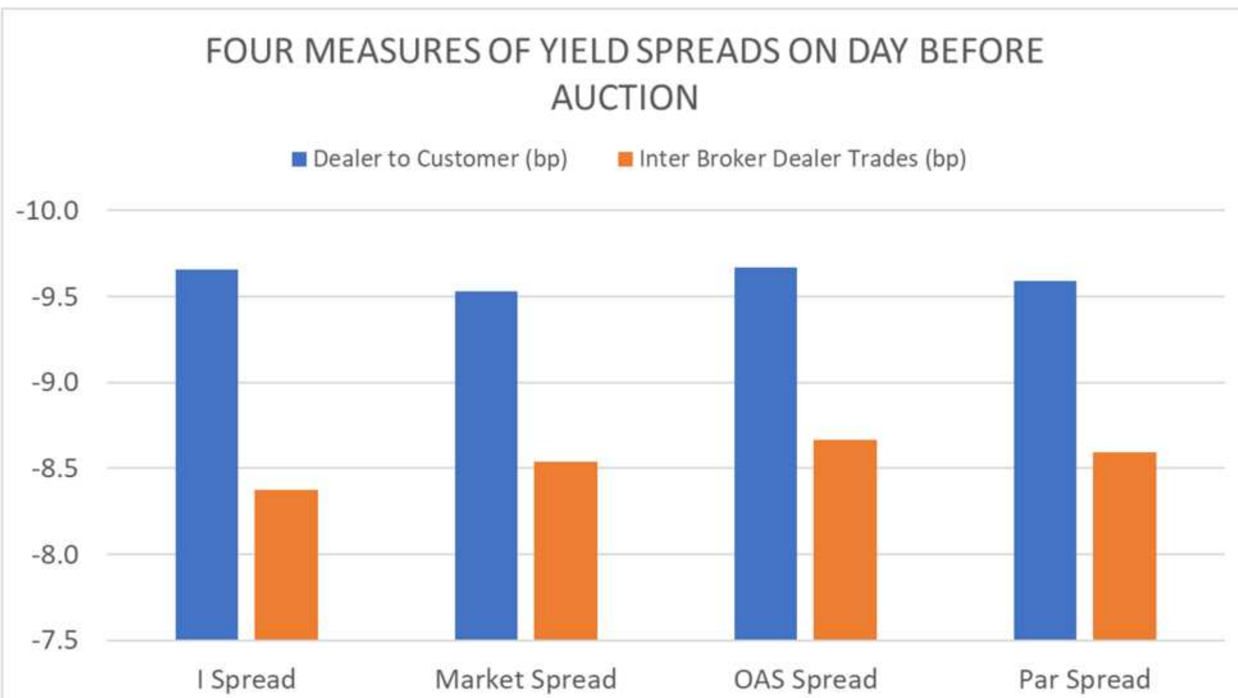
205. Significantly, this observed price inflation in advance of new GSE Bond issuances dissipated after January 1, 2016, when prices of bonds that were about to go off-the-run traded at lower prices than newly issued GSE Bonds.

206. Plaintiffs isolated Defendants' price inflation of Notes about to go off-the-run and account for any other potential macroeconomic factors by comparing the prices Defendants charged to their customers for these GSE Bonds and the prices that Defendants charged to each other for the same Notes. This comparison shows that the price inflation for Notes about to go off-the-run only occurred in transactions involving ***customers***. In otherwise identical transactions between the Defendants themselves, no price inflation occurred.

[9] *See, e.g.*, U.S. Department of the Treasury, Treasury Notes, "Examining Liquidity in On-the-Run and Off-the-Run Treasury Securities" dated May 20, 2016; Federal Reserve Bank of New York Staff Reports, "An Index of Treasury Market Liquidity: 1991-2017," October 2017.

207. For example, Plaintiffs examined the yield spreads on 55 different on-the-run GSE Bonds on the dates around the auction of a new, replacement on-the-run bond during the Class Period. In particular, they looked at the four different yield curves estimated by Market Axess based on enhanced TRACE data.[10] For each of these calculations of yield spreads over treasury bonds, Plaintiffs found that the yield spreads did not behave as would be expected when GSE Bonds were replaced by newer on-the-run bonds.

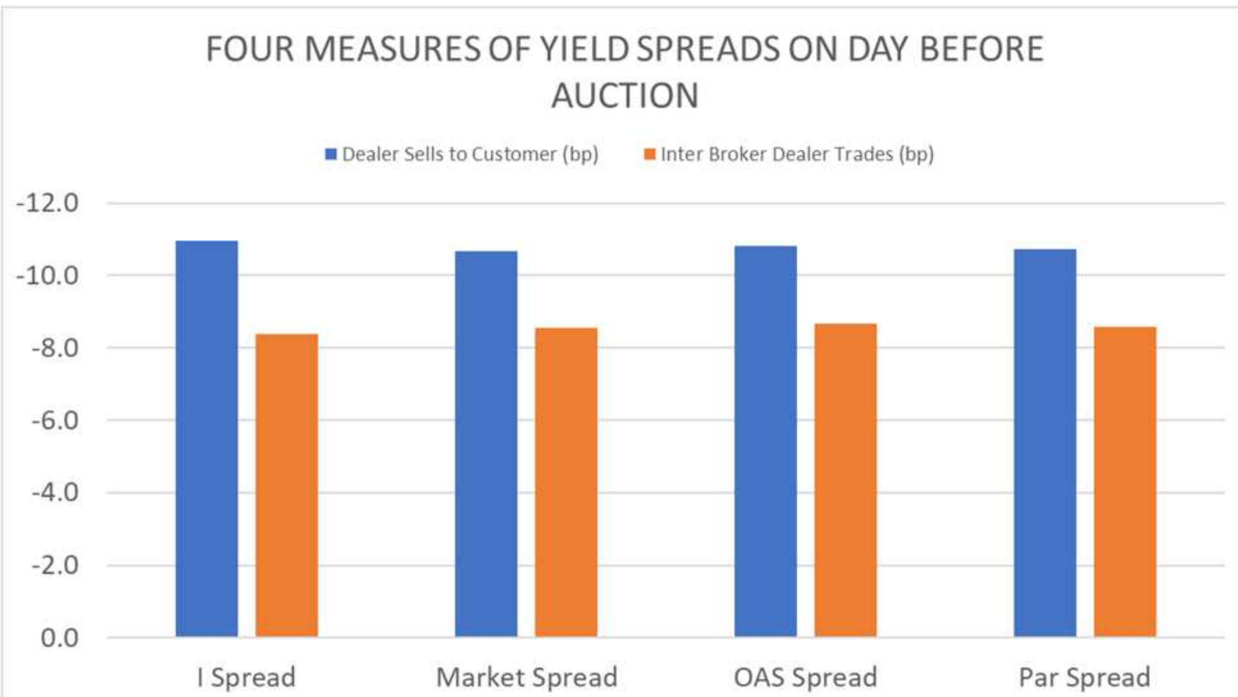
208. In fact, Plaintiffs found that dealers actually charged inflated prices to customers (both buyers and sellers) on the day before the new auction date. Statistically significant at the 95% level, the graph shows that interdealer prices (as represented by yield spreads)[11] are substantially lower than prices dealers set for either purchases or sales by non-dealer customers.

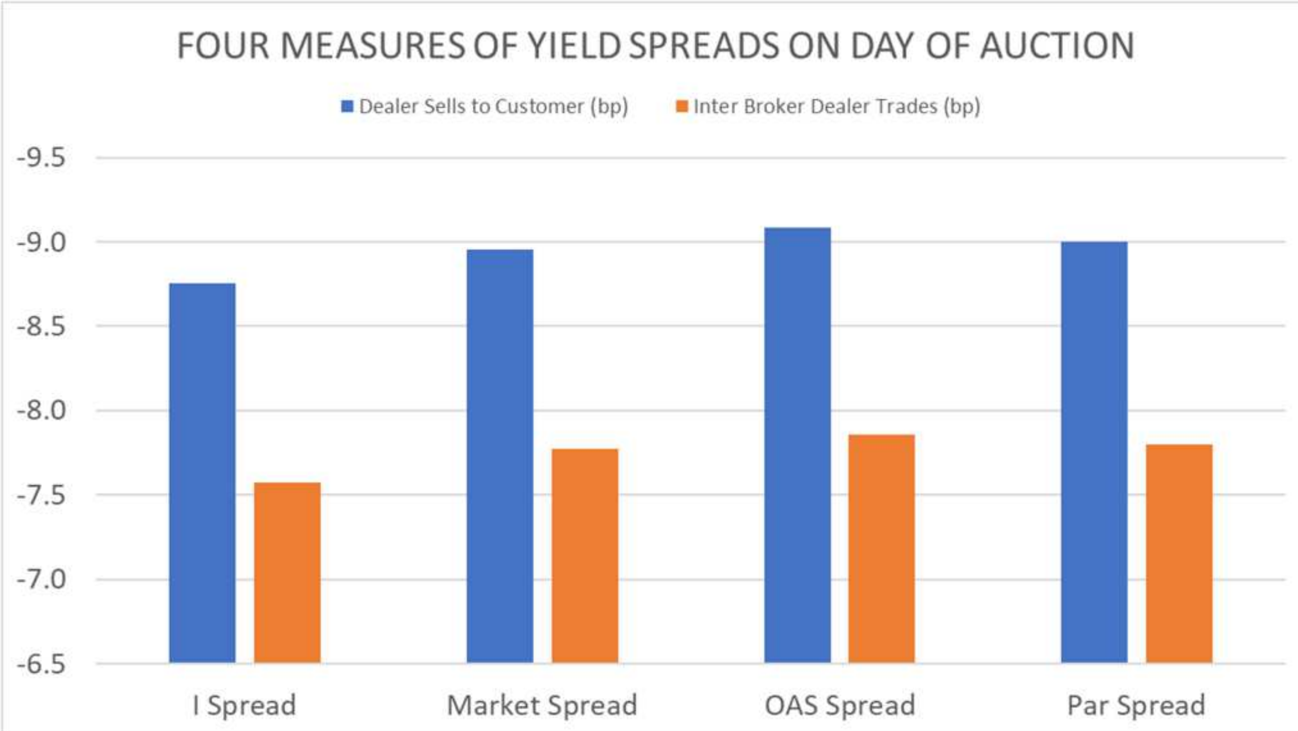


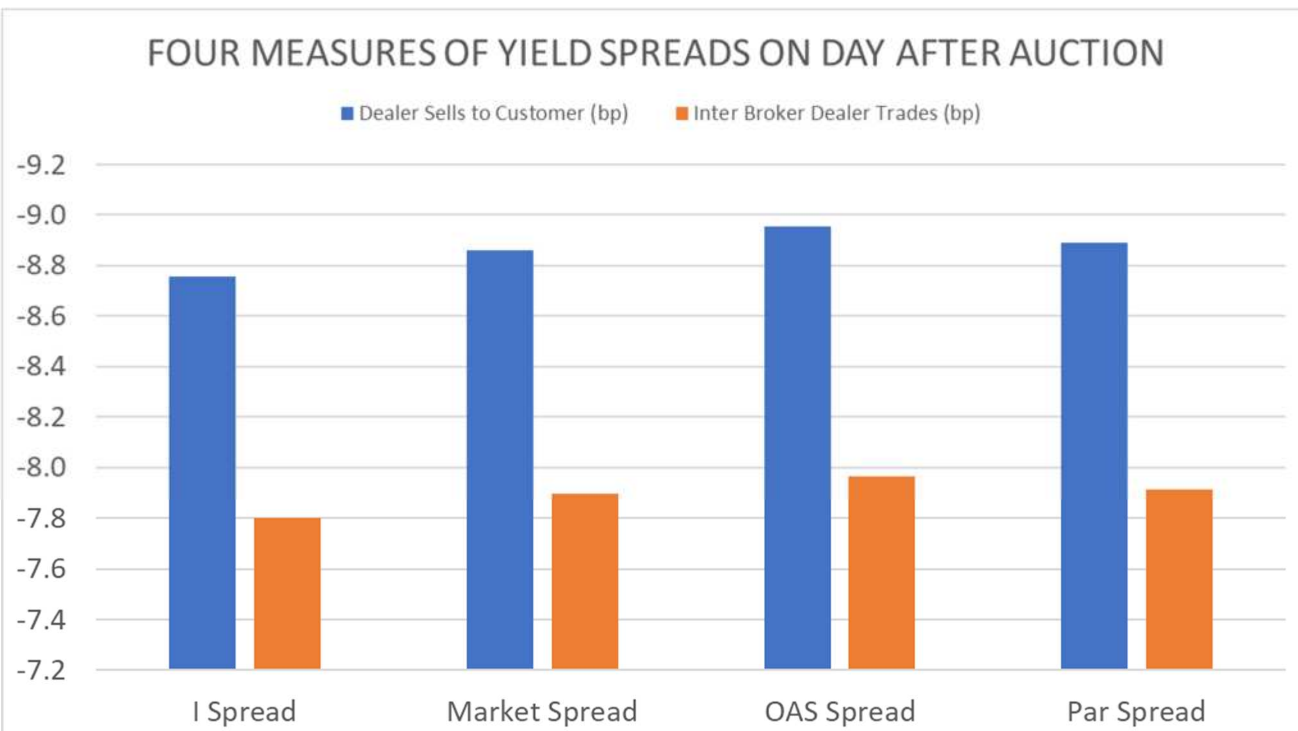
[10] These four yield spreads are: (1) the Interpolated Spread or "I Spread"; (2) the Market Spread; (3) the Option Adjusted Spread or "OAS"; and (4) the par spread. Each of these measures a bond's rate of return after controlling for various factors.

[11] Note: More negative yield spreads correspond to lower yields and higher prices.

209. Plaintiffs further looked at the prices of GSE Bonds over a three-day period surrounding the new issuance when the bond went "off-the-run." In a competitive market, a bond price would decrease and the bond yield would increase when the formerly on-the-run bond switched to the less liquid off-the-run market. Instead, during the Class Period, GSE Bond prices charged to non-dealer customers buying the formerly on-the-run bond were high on the day before the auction when the bond was still on-the-run. Further, prices continued to be high compared to interdealer prices over the three-day period surrounding the auction. This was true for each of the four different measures of yield spreads:

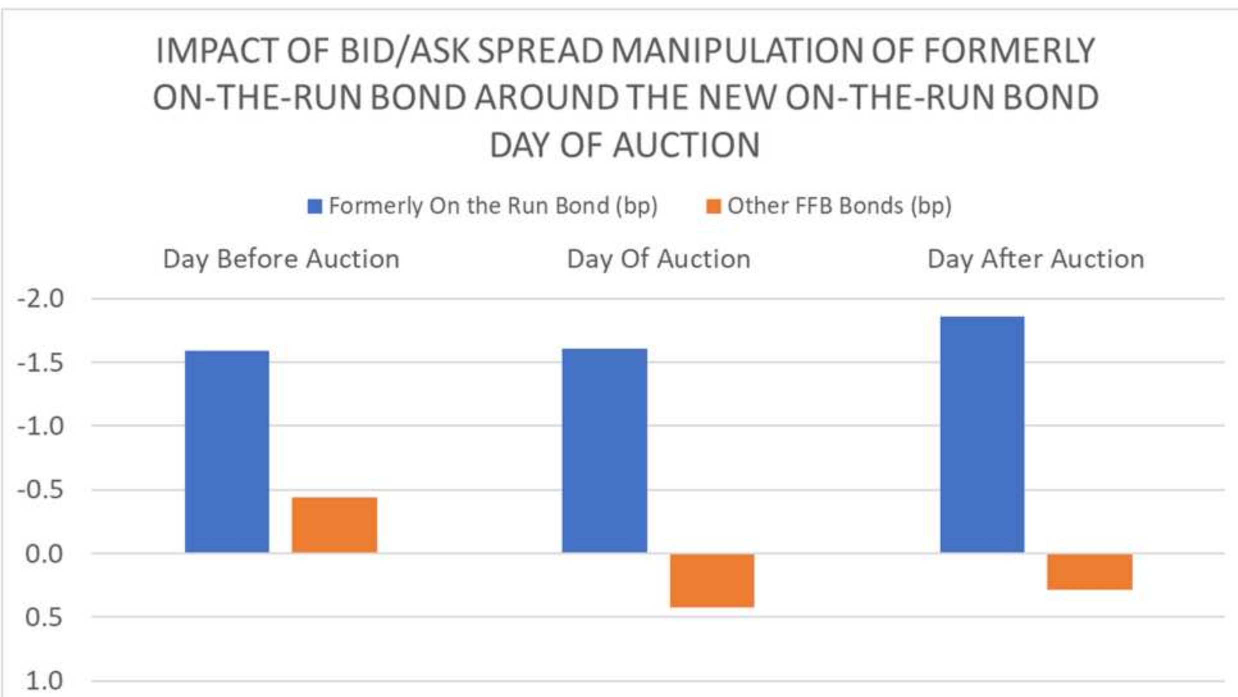






210. Finally, Plaintiffs cross-checked the yield analyses with an analysis of the bid-ask spreads on dates around the shift in a GSE Bond's status from on-the-run to off-the-run. Yield

spreads measure bond prices, whereas bid-ask spreads measure transaction costs and thus the profits earned by dealers for providing market making services in bond trading. As discussed in Part I, the less liquid the bond, the higher the bid-ask spread. Thus, it is a well-known characteristic that bid-ask spreads on off-the-run bonds are higher than for on-the-run bonds. However, Plaintiffs found that bid-ask spreads for formerly on-the-run bonds declined almost two basis points (statistically significantly at the 95% level) below other GSE Bonds on each of the three dates around the new auction of a replacement on-the-run bond. This atypical narrowing of bid-ask spreads for newly off-the-run bonds is consistent with dealer manipulation of GSE Bond prices around the new issue date. In general, the lower the bid-ask spread, the greater the likelihood of transactions. Thus, narrower bid-ask spreads were used by dealers to encourage customer purchases of GSE bonds at inflated prices.



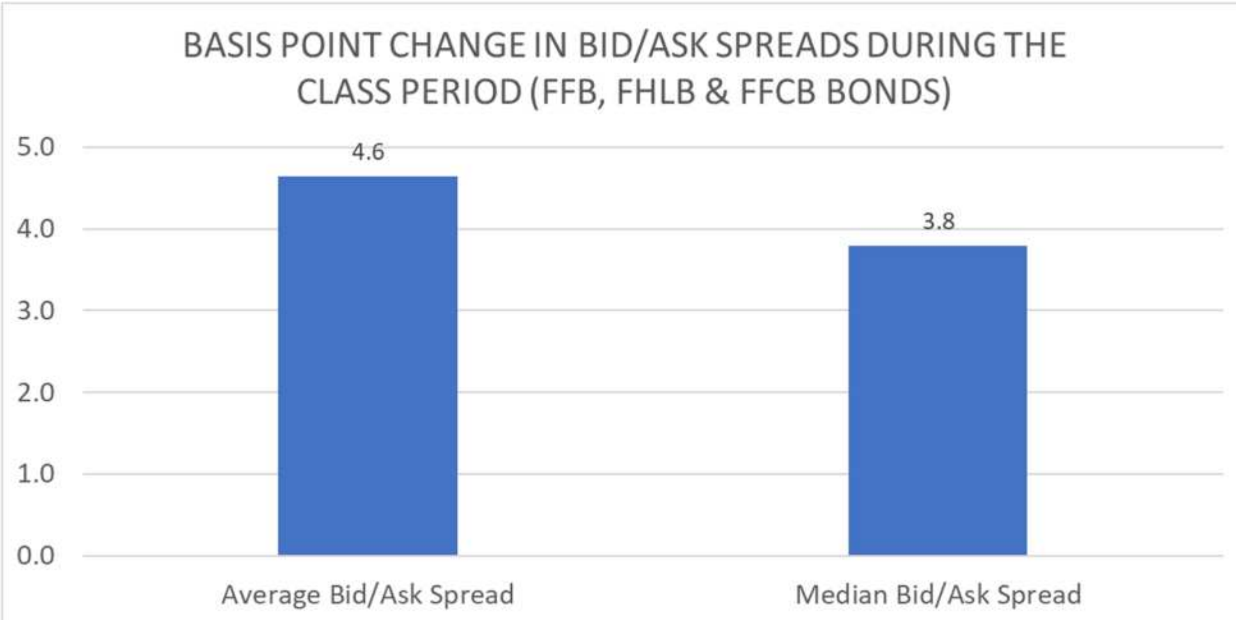
3. Bid-Ask Spreads for GSE Bonds Were Artificially Widened

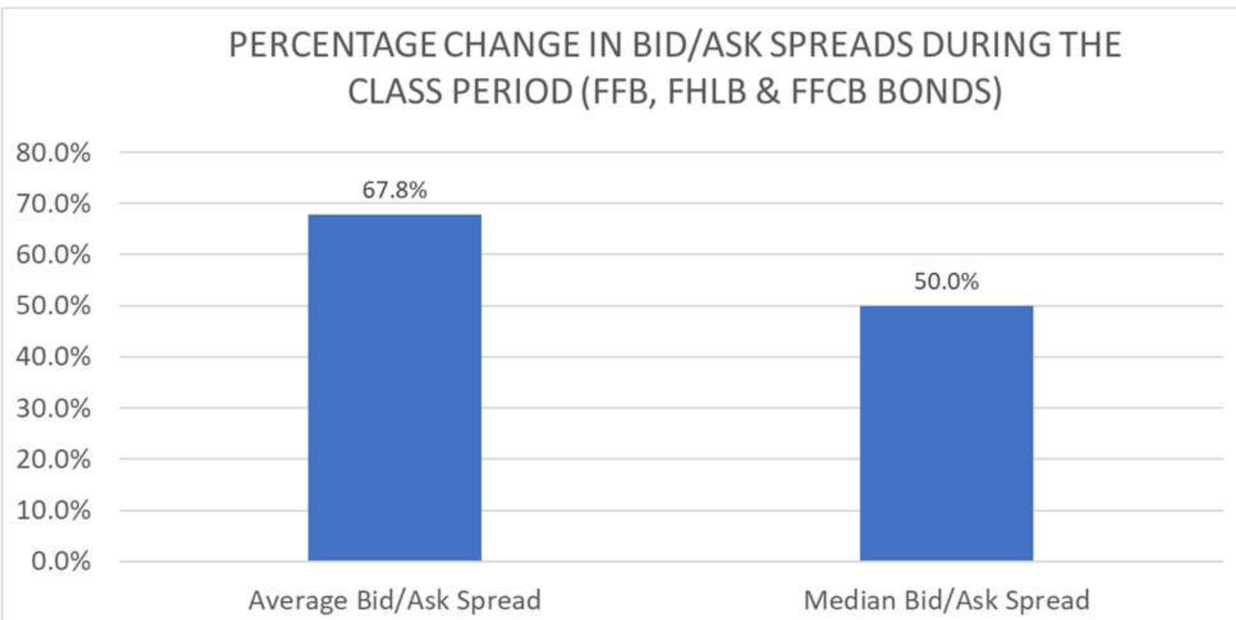
211. Plaintiffs analyzed the bid-ask spreads quoted by dealers in the GSE Bond market both before and after January 1, 2016. This analysis yielded statistically significant results showing that bid-ask spreads were wider during the Class Period as compared to the post-Class Period.

212. These results were highly anomalous, and they are even more significant and unusual after analyzing the relationship between bid-ask spreads in the GSE Bond market to changes in liquidity (*i.e.*, GSE Bond transaction volume). For example, while bid-ask spreads in the GSE Bond market should have narrowed during the Class Period in response to increases in market liquidity caused by advances in electronic trading and transparency (following the introduction of TRACE), Approved GSE Dealers charged their customers materially ***wider*** bid-ask spreads in the GSE Bond market during this period.

213. The direct relationship observed between liquidity and bid-ask spreads is the exact opposite of what is expected in a competitive market. However, it is entirely consistent with the direct evidence of Defendants' agreement not to compete for GSE Bond market activity in the secondary market. Plaintiffs' analysis shows that Defendants responded to greater liquidity by agreeing to maintain wider bid-ask spreads, thereby earning additional profits on each GSE Bond transaction with customers.

214. Plaintiffs examined bid/ask spreads on GSE bonds and found that they were wider during the Class Period. Controlling for other corporate bond spreads and market volatility, Plaintiffs found that average bid/ask spreads increased by a statistically significant (at the 99% level) amount of 4.66 basis points during the Class Period, representing a 68% increase in average spreads.

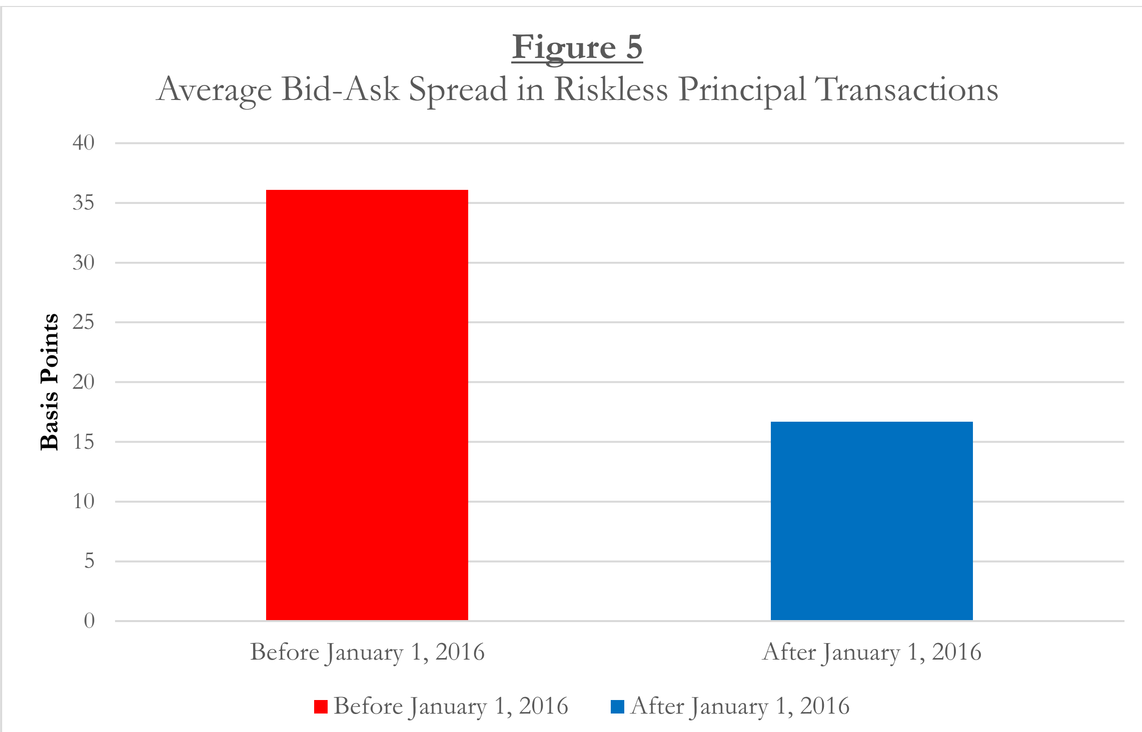




215. The effect of Defendants' conduct on bid-ask spreads can be further observed in the bid-ask spreads that Defendants quoted in "riskless principal" transactions. A riskless principal transaction is a trade where a dealer purchases a GSE Bond after it has already agreed to sell the GSE Bond to a customer or vice-versa, and therefore never bears any liquidity risk associated with carrying that GSE Bond. Therefore, the dealer can complete a round-trip transaction within seconds

by simultaneously buying and selling the GSE Bond. Analyzing riskless principal transactions is useful for measuring the impact of Defendants' conspiracy on bid-ask quotes because these transactions are not impacted by market liquidity or other changes in market conditions.

216. This analysis yields statistically significant results further confirming that Defendants quoted artificially wide bid-ask spreads for GSE Bonds to customers. Between March 1, 2010 and January 1, 2016, the average bid-ask spread for riskless principal GSE Bond transactions was 36.1 basis points. In the post-Class Period, bid-ask spreads in riskless principal GSE Bond transactions substantially decreased to an average of 16.7 basis points, as shown in Figure 5 below. This represents an additional 116% in profits per transaction for Defendants prior to January 1, 2016 and corresponding overcharges paid by investors.



217. Plaintiffs also analyzed all currently available GSE Bond quotes for which it was possible to identify the dealer who supplied the quote.[12] This dataset included more than 36 million GSE Bond quotes from January 1, 2009 through January 1, 2016, and more than 47 million quotes after January 1, 2016, including quotes from seven Defendants.[13] Plaintiffs removed the highest 5% of quotes and the lowest 5% of quotes from the sample. This process ensures that the results of the analysis are not skewed by outliers.

218. Plaintiffs adjusted the spreads in the bid-ask quotes in the sample to account for differences in the notional amount of GSE Bonds quoted. This step ensures that differences in the notional value of the quoted GSE Bonds do not affect the analysis. The result is the "average relative bid-ask spread."

219. Last, Plaintiffs compared the average relative bid-ask spreads in the quotes attributable to the Defendants during the Class Period against the average relative bid-ask spreads in the quotes attributable to the Defendants after the Class Period.

220. The results of this analysis are shown in Figure 6, below. The average relative bid-ask spread in Defendants' GSE Bond quotes (represented by the red bar) was 35.4 basis points during the Class Period. After the Class Period, the average relative bid-ask spread in Defendants' GSE Bond quotes drops to 18.6 basis points. Thus, the average relative bid-ask spread in Defendants' GSE Bond quotes during the Class Period, represented by the red bar, was ***90% wider*** than the average relative bid-ask spread in Defendants' GSE Bond quotes after the Class Period, represented by the blue bar.

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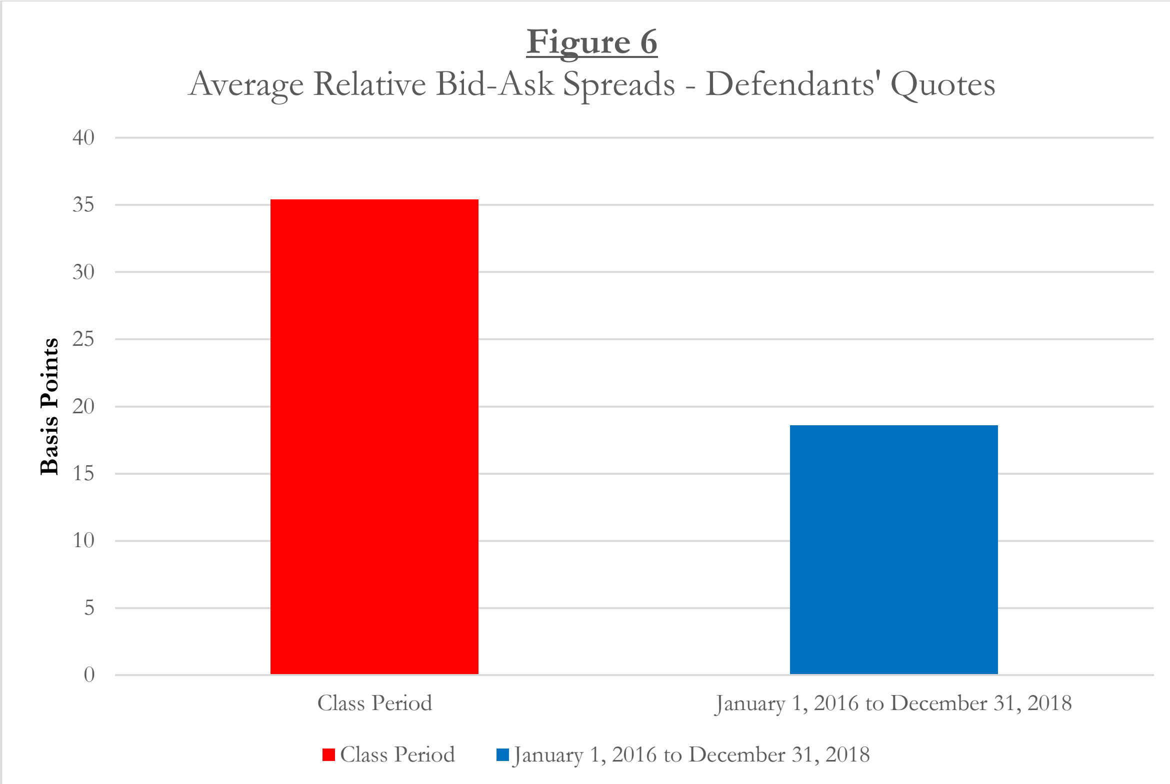
[12] Generally, the identity of the dealer supplying a GSE Bond quote is removed from the data. For this analysis, Plaintiffs used all available quotes that identified the dealer supplying the quote.

[13] Quotes could be attributed to the following seven Defendants: BCI, BNP Securities, Morgan Stanley, Goldman Sachs, JPMS, CS Securities, and SG Securities.



221. The results described above indicate that Defendants were responsible for the artificially wide bid-ask spreads quoted to investors, including Plaintiffs, during the Class Period.

E. Defendants Failed to Adequately Supervise Their Trading and Sales Business During the Class Period

222. Defendants failed to properly train sales and trading staff on critical issues such as ethical behavior, the obligation to independently determine pricing, the distinction between lawful syndication activities and unlawful price-fixing in the secondary market, and the markets' reliance on Approved GSE Bond Dealers to determine fair and competitive GSE Bond prices. These failures have been well-documented by regulators who have found collusion among Defendants or their parent companies in multiple other financial markets during the Class Period, as described in detail below.

223. Defendants also invited misconduct among their GSE Bond sales and trading staff by creating conflicts of interest. For example, Defendants tasked the same individuals who

participated in underwriting GSE Bonds with determining secondary market pricing. This created a conflict of interest because these traders book profits based on the difference between the price at which they purchased GSE Bonds from GSEs and the prices at which they sold GSE Bonds to investors. This lack of ethical walls also created an unfair advantage for Defendants' traders and sales staff because it allowed them to improperly leverage information gleaned from participating in the GSE Issuance Process (such as investor demand and a GSE's plans for issuing more GSE Bonds) to earn additional profits trading in the secondary market. This practice was so common in the GSE Bond market during the Class Period that insiders gave GSE Bond trading desks that lacked such ethical walls a nickname, referring to them as "Casino Royale."

224. Defendants' failure to supply proper training and supervision was especially egregious because they compensated their GSE Bond trading and sales staff primarily through variable compensation (*i.e.*, bonuses), based on both individual profits and the profitability of each respective bank's GSE Bond trading and sales business. Although individuals' compensation packages are a closely guarded secret, the practice of awarding variable compensation based solely on profits has been studied by observers such as the Brookings Institution.[14] Alternative measures of performance, such as client service, ethical behavior, and adequate supervision of subordinates, did not factor into these compensation decisions.

225. Defendants' prioritization of their own profits at the expense of lawful, ethical behavior is especially egregious in the GSE Bond market for several reasons. First, Defendants' largest customers are institutional investors like Plaintiffs, many of which are state or municipal funds. These funds are often required to invest in relatively safe investments, such as GSE Bonds,

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14 *See, e.g.*, Douglas J. Elliot, Brookings Institution, *Wall Street Pay: A Primer* (Jan. 11, 2010).

because they are subject to strict mandates concerning the level of risk that they can assume in their investments. These customers depend on these investments to generate sufficient returns so that they can afford payments for beneficiaries and can finance critical public services.

226. Second, Defendants serve as "price makers" in the GSE Bond market, which is both highly concentrated and opaque. *See* Part I., above. Accordingly, market participants like Plaintiffs must rely on Defendants as a source of information to determine competitive price levels for GSE Bonds so that they can make informed investment decisions. Despite their critical role in ensuring competitive pricing in the GSE Bond market, Defendants failed to make the necessary investments in compliance, ethics training, and supervision.

227. Defendants engaged in multiple, similar price-fixing conspiracies in various financial markets during the Class Period that led government investigators to find parallel deficiencies in oversight and control at Defendants' trading and sales businesses. These ongoing investigations have resulted in criminal trials and convictions, billions of dollars in fines, and successful litigation by injured investors.

228. These findings further support the conspiracy alleged in this Complaint because they demonstrate that each Defendant employed deficient compliance and oversight systems in their sales and trading businesses during the Class Period and engaged in anti-competitive conduct across numerous financial markets.

229. FX: Multiple Defendants here failed to control or detect rampant misconduct amongst their trading staff in the foreign exchange market. These failures allowed traders to fix bid-ask spreads, coordinate trading strategies with competitors to manipulate benchmark prices, and share confidential customer order information and proprietary information on trading positions with competitors in group chat rooms with names like "The Cartel." Defendants' deficient

oversight and controls allowed this anticompetitive conduct to persist undetected for years during the Class Period. The DOJ's Antitrust Division, the same regulatory office presently investigating Defendants' collusive conduct in the GSE Bond market, has obtained guilty pleas against the following corporate parents of Defendants in this case for failing to adequately monitor anticompetitive conduct in their subsidiaries' trading businesses: Citicorp. (a wholly owned, direct subsidiary of Citigroup Inc., the parent company of Defendant CGMI), Barclays PLC (the corporate parent of Defendant BCI), and JPMorgan Chase & Co. (the corporate parent of JP MNA and Defendant JPMS), for operating inadequate oversight measures that allowed trading and sales staff to engage in a years' long conspiracy to fix FX prices during the Class Period. Due to its conduct in the FX market, DOJ found UBS to be in breach of its non-prosecution agreement related to UBS's conduct in the setting of "IBOR" benchmark rates. The European Commission also recently imposed fines of over €1 billion on banks, including the corporate parents of Defendants JPMS, BCI, and CGMI for their anticompetitive conduct in the FX market. UBS was provided full immunity by the European Commission in exchange for providing information about the FX conspiracy. CS AG has also been charged with engaging in "anti-competitive practices" by the European Commission. CS AG, Deutsche Bank AG ("DB AG"), and Goldman Sachs Group, Inc., the parent company of Goldman Sachs, have also entered into Consent Orders with the New York State Department of Financial Services regarding their anticompetitive conduct in the FX market. Regulatory fines against the banks totaled over $10 billion. Civil settlements thus far total over $2.3 billion.

230. <u>LIBOR/Euribor/Yen LIBOR/Swiss franc LIBOR</u>: Government investigations and civil lawsuits have revealed widespread collusion among banks to manipulate benchmark interest rates for multiple currencies (U.S. Dollar LIBOR, Euribor, Yen LIBOR, Swiss franc LIBOR)

during the Class Period. These investigations have led to fines of upwards of $9 billion and civil settlements over $500 million for price fixing by the following corporate parents of Defendants here who failed to detect and prevent anticompetitive conduct by trading and sales staff within their subsidiaries. Barclays PLC, Bank of America Corporation (the parent of BANA and Merrill Lynch), Deutsche Bank AG (the corporate parent of DBSI), UBS AG, JPMorgan Chase & Co., and Citigroup Inc have all been fined or plead guilty. Regulators found that trading staff within these banks engaged in widespread misconduct during the Class Period, including coordinating false submissions by panelists to the benchmark-setting panel, sharing customer and order information, and manipulating market prices by submitting false orders (*i.e.*, "spoofing").

231. ISDAfix: Government regulators captured over $850 million in fines from banks, including DBSI, JP MNA, BNP Securities, BANA, Citibank, N.A. (a wholly owned subsidiary of Defendant Citigroup Inc.), Goldman Sachs, and BCI, for operating deficient compliance and oversight functions that allowed traders to systematically manipulate the U.S. dollar ISDAfix benchmark during the Class Period to boost trading profits. Civil settlements in the case totaled over $500 million.

232. SSA Bonds: A DOJ investigation into price-fixing in the sub-sovereign and supranational agency ("SSA") bond market became public in December of 2015. It quickly prompted simultaneous cartel investigations by the UK Financial Conduct Authority, the European Commission, and the filing of private lawsuits. The private civil action, originally filed in May 2016, was amended in April 2017 to include 10 banks (originally filed against five) and hundreds of redacted chats and transcripts that demonstrated that these banks failed to oversee collusive communications by trading and sales staffs in their bond businesses. In August 2017, Deutsche

Bank AG and Bank of America Corp. agreed to settle for a total of $65.5 million. In January 2019, HSBC Holdings Plc agreed to pay $30 million to settle the claims.

233. Mexican Government Bonds: The Mexican antitrust regulator, the Comisión Federal de Competencia Económica ("COFECE"), announced in April 2017 that it uncovered evidence of anticompetitive conduct among dealers in the Mexican Government Bond market, including subsidiaries of Citigroup Inc., JPMorgan Chase & Co., and Bank of America Corp. At least one bank was accepted into its cartel leniency program after admitting to participation in a conspiracy to fix Mexican Government Bond prices.

234. Swiss Franc Interest Rate Derivatives: The European Commission fined UBS AG, JPMorgan Chase & Co., and CS AG a total of €32.3 million euros for conspiring to fix bid-ask spreads in the market for interest rate derivatives denominated in Swiss francs. The Swiss franc interest rate derivatives conspiracy operated similarly to the conspiracy alleged in this Complaint and involved an agreement among horizontal competitors in the OTC market for derivatives to charge inflated bid-ask spreads to customers. These parent companies of Defendants failed to detect and deter collusive communications among traders at these banks.

III. ANTITRUST INJURY

235. Plaintiffs are domestic consumers of GSE Bonds. They purchased and sold billions of dollars' worth of GSE Bonds in the United States during the Class Period, doing so directly with each Defendant.

236. As described above, Defendants fixed the prices of GSE Bonds during the Class Period for their own profit.

237. As a direct result of Defendants' misconduct, Plaintiffs were overcharged each time they purchased GSE Bonds from Defendants and underpaid each time they sold GSE Bonds to

Defendants. Thus, as set forth in more detail below, Plaintiffs were injured and suffered harm in each GSE Bond transaction conducted during the Class Period.

238. **Commonwealth Funds:** Commonwealth Funds transacted tens of billions of dollars' worth of GSE Bonds in the United States during the Class Period directly with Defendants BCI, Merrill Lynch, BNP Securities, CGMI, CS Securities, DBSI, First Tennessee, FTN Financial, Goldman Sachs, JPMS, UBS Securities, TD Securities, MS&Co., HSBC Securities, Cantor Fitzgerald, Nomura Securities, and SG Securities. These transactions were entered at artificial prices directly caused by Defendants' conspiracy. For example, the following transactions involve purchases of GSE Bonds which the cooperating alleged co-conspirator identified as among those whose FTT prices Defendants agreed to fix during the Class Period:

Date	CUSIP	Issuer	Amount	Counterparty
4/23/2012	313378BR1	FHLB	$ 8,975,000	Morgan Stanley & Co. Inc.
4/18/2013	3133EAJ33	FFCB	$ 50,000	BNP Paribas Securities
11/12/2013	3134G4LD8	Freddie Mac	$ 250,000	BNP Paribas Securities
3/6/2014	3133EAJ33	FFCB	$ 500,000	Deutsche Bank Securities Inc.
3/21/2014	3133EAJ33	FFCB	$ 2,970,000	Deutsche Bank Securities Inc.
5/28/2015	3134G62E2	Freddie Mac	$ 5,000,000	Deutsche Bank Securities Inc.

239. As demonstrated by the allegations in Part II. A-D., above, Defendants conspired to inflate the FTT prices prior to selling GSE Bonds in the secondary market. As a result, Commonwealth Funds entered at least those transactions listed above at artificially inflated prices, suffering monetary losses and antitrust injuries, when they paid more for these GSE Bonds than they should have during the Class Period.

240. In addition, and as a direct result of Defendants' misconduct, Commonwealth Funds were overcharged each time they purchased GSE Bonds from Defendants and underpaid each time they sold GSE Bonds to Defendants. Thus, as set forth in more detail below,

Commonwealth Funds were injured and suffered harm in each GSE Bond transaction conducted during the Class Period.

241. Commonwealth Funds' GSE Bond transactions include purchases of newly issued GSE Bonds in the week following GSE Bond issuances, and purchases and sales with Defendants at artificial bid and ask prices that Defendants agreed to charge customers during the Class Period. Accordingly, Commonwealth Funds were injured when they paid more in GSE Bond purchases and received less in GSE Bond sales with Defendants during the Class Period as a direct result of Defendants' conspiracy. *See* Part II.C.1-3., above.

242. For example, PA Treasury purchased GSE Bonds from DBSI on March 3, 2009. Fannie Mae issued these GSE Bonds on February 27, 2009. During the Class Period, DBSI participated in a conspiracy to fix prices in the GSE Bond market, which included charging artificially inflated prices for newly issued GSE Bonds. *See* Part II.C.1., above. Accordingly, PA Treasury was injured when it paid more than it should have for GSE Bonds it bought from DBSI on March 3, 2009.

243. Commonwealth Funds made numerous additional GSE Bond purchases from Defendants on offer days or in the week after GSE Bond issuances throughout the Class Period.

244. Commonwealth Funds also suffered injury by paying artificially higher prices when buying GSE Bonds, and receiving artificially lower prices when selling GSE Bonds, as a result of Defendants' agreement to maintain artificially wide bid-ask spreads.

245. For example, on September 26, 2011, Commonwealth Funds sold GSE Bonds to Defendant BCI. Fannie Mae issued these GSE Bonds on March 4, 2011, and they matured on April 11, 2016. During the Class Period, BCI participated in a conspiracy to fix GSE Bond prices, including by agreeing to maintain artificially wide bid-ask spreads. *See* Part II.C.3, above.

Accordingly, Commonwealth Funds were injured when they received less than they should have for GSE Bonds they sold to BCI on September 26, 2011.

246. **IBEW 103**: "IBEW 103" is a domestic consumer of GSE Bonds. During the Class Period, it purchased and sold millions of dollars of GSE Bonds in the United States, including directly with Defendants BCI, JPMS, UBS Securities, CGMI, Goldman Sachs, BNP Securities, CS Securities, and Merrill Lynch at artificial prices due to Defendants' conspiracy.

247. IBEW 103's GSE Bond transactions include GSE Bond purchases of on-the-run GSE Bonds in the week prior to new GSE Bond issuances, GSE Bond purchases of newly issued GSE Bonds in the week following GSE Bond issuances, and purchases and sales with Defendants at artificial bid and ask prices that Defendants agreed to charge customers during the Class Period. Accordingly, IBEW 103 was injured when it paid more in GSE Bond purchases and received less in GSE Bond sales with Defendants during the Class Period as a direct result of Defendants' conspiracy.

248. For example, IBEW 103 Pension Plan purchased GSE Bonds from Defendant BNP Securities on or around February 8, 2012. Fannie Mae issued these GSE Bonds on or around February 6, 2012. During the Class Period, BNP Securities participated in a conspiracy to fix prices in the GSE Bond market, which included charging artificially inflated prices for newly issued GSE Bonds. Accordingly, IBEW 103 Pension Plan was injured when it paid more than it should have for GSE Bonds it bought from BNP Securities on or around February 8, 2012.

249. Likewise, IBEW 103 Health Plan purchased GSE Bonds from Defendant JPMS on or around August 18, 2011. Fannie Mae issued these GSE Bonds on or around August 17, 2011. During the Class Period, JPMS participated in a conspiracy to fix prices in the GSE Bond market, which included charging artificially inflated prices for newly issued GSE Bonds. Accordingly,

IBEW 103 Health Plan was injured when it paid more than it should have for GSE Bonds it bought from JPMS on or around August 18, 2011.

250. IBEW 103 cumulatively made dozens more GSE Bond purchases from Defendants on offer days or in the week after GSE Bond issuances throughout the Class Period.

251. IBEW 103 also suffered injury by paying artificially higher prices when buying on-the-run GSE Bonds in the week prior to new issuances. Specifically, IBEW 103 Pension Plan purchased on-the-run GSE Bonds from Defendant BCI on or around October 29, 2010, which GSE Bonds went off-the-run on or around November 4, 2010. During the Class Period, BCI participated in a conspiracy to fix prices in the GSE Bond market, which included charging artificially inflated prices for on-the-run GSE Bonds in the period leading up to a new GSE Bond issuance. Accordingly, IBEW 103 Pension Plan was injured when it paid more than it should have for GSE Bonds it bought from BCI on or around October 29, 2010.

252. IBEW 103 also suffered injury by paying artificially higher prices when buying GSE Bonds, and receiving artificially lower prices when selling GSE Bonds, as a result of Defendants' agreement to maintain artificially wide bid-ask spreads.

253. For example, IBEW 103 Pension Plan sold GSE Bonds to CS Securities on or around March 16, 2011. Freddie Mac issued these GSE Bonds on or around May 21, 2009, and they matured on or around June 15, 2012. During the Class Period, Credit Suisse participated in a conspiracy to fix prices charged to investors in the GSE Bond market, including by agreeing to maintain artificially wide bid-ask spreads. Accordingly, IBEW 103 Pension Plan was injured when it received less than it should have for GSE Bonds it sold to CS Securities on or around March 16, 2011.

254. Likewise, IBEW 103 Health Plan sold GSE Bonds to BCI on or around June 15, 2012. Freddie Mac issued these GSE Bonds on or around January 13, 2012, and they will mature on or around January 13, 2022. During the Class Period, BCI participated in a conspiracy to fix prices charged to investors in the GSE Bond market, including by agreeing to maintain artificially wide bid-ask spreads. Accordingly, IBEW 103 Health Plan was injured when it received less than it should have for GSE Bonds it sold to BCI on or around June 15, 2012.

255. **Birmingham**: Birmingham is a domestic consumer of GSE Bonds. It purchased and sold hundreds of millions of dollars' worth of GSE Bonds in the United States during the Class Period, including directly with Defendants First Tennessee Bank, N.A.; First Tennessee Securities Corp.; CGMI; Merrill Lynch; MS&Co.; and Cantor Fitzgerald at artificial prices due to Defendants' conspiracy.

256. Birmingham's GSE Bond transactions include GSE Bond purchases of off-the-run GSE Bonds in the week prior to new GSE Bond issuances, GSE Bond purchases of newly issued GSE Bonds in the weeks following GSE Bond issuances, and purchases and sales with Defendants at artificial bid and ask prices that Defendants agreed to charge customers during the Class Period. Accordingly, Birmingham was injured when it paid more in GSE Bond purchases and received less in GSE Bond sales with Defendants during the Class Period as a direct result of Defendants' conspiracy. *See* Part II.C.1-3., above.

257. For example, Birmingham purchased GSE Bonds from Defendant Merrill Lynch on or around October 3, 2012. Fannie Mae issued these GSE Bonds on or around September 24, 2012 and they matured on or around October 26, 2017. During the Class Period, Merrill Lynch participated in a conspiracy to fix prices in the GSE Bond market, which included charging artificially inflated prices for newly issued GSE Bonds. *See* Part II.C.1., above. Accordingly,

Birmingham was injured when it paid more than it should have for GSE Bonds it bought from Merrill Lynch on or around October 3, 2012.

258. Birmingham made dozens more GSE Bond purchases from Defendants on offer days or in the week after GSE Bond issuances throughout the Class Period.

259. Birmingham also suffered injury by paying artificially higher prices when purchasing GSE Bonds as a result of Defendants' agreement to the fix the price of soon to be off-the-run GSE Bonds higher in the week leading up to new GSE Bond issuance.

260. Birmingham also suffered injury by paying artificially higher prices when buying GSE Bonds, and receiving artificially lower prices when selling GSE Bonds, as a result of Defendants' agreement to maintain artificially wide bid-ask spreads.

261. For example, on or around November 13, 2012, Birmingham sold GSE Bonds to Defendant CGMI. Fannie Mae issued these GSE Bonds on or around May 21, 2010, and they matured on or around June 26, 2013. During the Class Period, CGMI participated in a conspiracy to fix GSE Bond prices, including by agreeing to maintain artificially wide bid-ask spreads. *See* Part II.C.3, above. Accordingly, Birmingham was injured when it received less than it should have for GSE Bonds it sold to CGMI on or around November 13, 2012.

262. Institutional investors like Plaintiffs use GSE Bonds as important components of their investment portfolios because GSE Bonds carry low credit risk and generally offer greater returns than U.S. Federal Treasury Securities. Because there was no exchange or other public mechanism to obtain real-time pricing information in the market for GSE Bonds, Plaintiffs relied on quotes from Defendants to determine competitive pricing for GSE Bonds and made investment decisions based on this pricing information. By engaging in a secret, years-long price-fixing

conspiracy in the GSE Bond market, Defendants deprived Plaintiffs and the Class of the competitive pricing information that they were entitled to when making investment decisions.

CLASS ACTION ALLEGATIONS

263. Plaintiffs bring this action pursuant to Rule 23 of the Federal Rules of Civil Procedure on their own behalf and as representatives of the following Class:[15]

> All persons or entities who transacted in unsecured GSE Bonds issued by Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, Federal Farm Credit Banks, and Federal Home Loan Banks in the secondary market during the period of January 1, 2009 through January 1, 2016 (the "Class Period") with a Defendant where such transaction took place in the United States or its territories. Excluded from the Class are the Defendants and any parent, subsidiary, affiliate, employee, agent or co-conspirator of any Defendant. Also excluded is the Judge presiding over this action, his or her law clerks, their spouses, and immediate relations.[16]

264. The Class is so numerous that the individual joinder of all members is impracticable. While the exact number of Class members is unknown to Plaintiffs at this time, Plaintiffs are informed and believe that at least thousands of geographically dispersed Class members transacted in GSE Bonds during the Class Period at artificial prices due to Defendants' conspiracy.

265. Plaintiffs' claims are typical of the claims of the other members of the Class. Plaintiffs and the Class sustained damages arising out of Defendants' common course of conduct in violation of law as complained of herein. The injuries and damages of each member of the Class were directly caused by Defendants' wrongful conduct in violation of the laws as alleged herein.

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[15] Plaintiffs have defined the Class based on currently available information and hereby reserve the right to amend the definition of the Class, including, without limitation, the Class Period.

[16] The Class definition excludes transactions in which a party purchased a GSE Bond directly from Fannie Mae, Freddie Mac, FHLB, or FFCB.

266. Plaintiffs will fairly and adequately protect the interests of the members of the Class. Plaintiffs are adequate representatives of the Class and have no interests that are adverse to the interests of absent Class members. Plaintiffs have retained counsel competent and experienced in class action litigation, including antitrust class action litigation concerning collusion in financial markets.

267. Common questions of law and fact exist as to all members of the Class, which predominate over any questions affecting solely individual members of the Class. These common questions of law and facts include, without limitation:

(a) whether Defendants' collusion caused GSE Bond prices to be artificial during the Class Period;

(b) whether Defendants' unlawful acts violate Section 1 of the Sherman Act;

(c) whether Defendants' unlawful conduct caused injury to the business or property of Plaintiffs and the Class;

(d) the operative time period and extent of Defendants' foregoing violations; and

(e) whether such injury or the fact or extent of artificiality in GSE Bond prices caused by Defendants' conduct may be established by common, class-wide means, including, for example, by regression analysis, econometric formula, or other economic tests.

268. A class action is superior to other methods for the fair and efficient adjudication of this controversy because joinder of all Class members is impracticable. Treatment as a class action will permit a large number of similarly situated persons to adjudicate their common claims in a single forum simultaneously, efficiently, and without the duplication of effort and expense that

numerous individual actions would engender. Class treatment will also permit the adjudication of claims by many class members who could not afford individually to litigate claims such as those asserted in this Complaint. The cost to the court system of adjudication of such individualized litigation would be substantial. The prosecution of separate actions by individual members of the Class would create a risk of inconsistent or varying adjudications, establishing incompatible standards of conduct for Defendants.

269. Plaintiffs are unaware of any difficulties that are likely to be encountered in the management of this action that would preclude its maintenance as a class action.

EQUITABLE TOLLING AND FRAUDULENT CONCEALMENT

270. The statutes of limitations governing Plaintiffs' claims were tolled under the doctrine of fraudulent concealment until at least June 2018, when it was revealed that the DOJ Antitrust Division was investigating price-fixing in the market for GSE Bonds. The doctrine applies here because Defendants fraudulently concealed their misconduct through their own affirmative acts, and because Defendants' conduct was inherently self-concealing.

271. Defendants and their co-conspirators actively concealed their violations of law from Plaintiffs and the Class by, *inter alia*, (i) relying on non-public forms of communication, such as private electronic messages and telephone calls; (ii) implicitly representing that the GSE Bond pricing quotes Defendants supplied to Plaintiffs and the Class were the product of honest competition and not fixed by a conspiracy; and (iii) affirmatively misrepresenting that they complied with applicable laws and regulations, including antitrust laws. Below is a list of non-exhaustive examples of such statements that Defendants published during the Class Period:

a. Barclays PLC, reporting on behalf of BCI, reported in its 2010 Annual Report that it "operate[s] a system of internal control which provides reasonable assurance

of effective and efficient operations covering all controls, including financial and operational controls and compliance with laws and regulations." Barclays PLC claimed that it "acknowledges that free and fair competition is good for business and customers and clients, driving innovation and improvements in service provision."

b. Bank of America Corporation, reporting on behalf of Merrill Lynch, wrote in its 2010 Annual Report that it operated a program "consistently applied across the Corporation . . . to manage compliance risk." It also reported that it maintained an independent "Corporate Audit function" to "provide reasonable assurance" that "employees' actions are in compliance with . . . applicable laws and regulations." It further claimed that it emphasized a "culture of compliance" across the organization, including at Merrill Lynch.

c. Citigroup Inc. implemented a "Citi Code of Conduct" during and after the Class Period. The Citi Code of Conduct applied to all entities affiliated with Citigroup Inc., including CGMI, and stated that Citigroup Inc. and its affiliates were "committed to promoting free and competitive markets." In its 2010 Annual Report, Citigroup Inc. claimed that it "monitor[ed] and control[led]" employee conduct, which included employees of CGMI, through "compliance and legal reporting systems, internal controls, management review processes and other mechanisms."

d. Credit Suisse Group AG, reporting on behalf of CS Securities, boasted that it had developed a "strong compliance culture" during the Class Period. It wrote in its 2010 Annual Report that it continued to "proactive[ly] develop[] [its] compliance framework [to] position[it] well to respond to evolving regulation in the markets in which [it] operate[s]." Credit Suisse Group AG also emphasized that its "compensations practices

and plans . . . are consistent with and promote effective risk management practices as well as [its] compliance and control culture." It published an updated Code of Conduct in 2010 "to place a greater emphasis on the values and professional standards underpinning [its] control and compliance."

e. DB AG, which reports on behalf of Defendant DBSI, wrote in its 2010 Annual Report that it maintained a "Regional Management" group responsible for both local and corporate-wide "compliance with regulatory and control requirements." DB AG also represented that it was "in compliance with the German laws that are applicable to [its] business in all material aspects." Price-fixing agreements among horizontal competitors are prohibited under German law.

f. Goldman Sachs Group Inc., which reports on behalf of Goldman Sachs, wrote in its 2010 Annual Report that it "monitor[s] and control[s] [its] risk exposure through a risk and control framework encompassing a variety of separate but complementary financial, credit, operational, compliance and legal reporting systems, internal controls, management review processes and other mechanisms." Goldman Sachs Group Inc. further claimed that "compliance with the law is the minimum standard to which we hold ourselves." Goldman Sachs Group Inc. also published a Code of Conduct during the Class Period that purportedly required "fair and ethical competition" by its employees, including employees of Goldman Sachs, and prohibited "manipulation" and "unfair dealing practice[s]."

g. JPMorgan Chase & Co. published a "Code of Conduct" during the Class Period that applied to "all its direct and indirect subsidiaries." In the Code of Conduct, JPMorgan Chase & Co. claimed that it was "committed to complying with the letter and

spirit of applicable competition laws wherever we do business." JPMorgan Chase & Co., which reports on behalf of JPM NA and JPMS, reported in its 2010 Annual Report that its Audit Committee "reviews with management the system of internal controls that is relied upon to provide reasonable assurance of compliance with the Firm's operational risk management processes." It further assured investors that it "has established policies and procedures, and has in place various oversight functions, intended to promote the Firm's culture of 'doing the right thing.'"

h. First Tennessee and FTN Financial reported under First Horizon's 2010 Annual Report that First Horizon had "[m]anagement processes, structure, and policies [which] are designed to help ensure compliance with laws and regulations as well as provide organizational clarity for authority, decision-making, and accountability." First Horizon also reported having a risk management team that "monitor[s] business practices in relation to those [established appropriate operating] standards." It also wrote in its Code of Conduct that it prohibited "manipulation, concealment, abuse of privileged information, misrepresentation of material facts or any unfair dealing practice."

i. BNP Paribas SA, which reports on behalf of subsidiaries including BNP Securities, wrote in its 2010 Annual Report that it had in place a "complex internal control governance structure involving the Board of Directors, through various Committees," to purportedly ensure an effective internal compliance system. BNP Paribas SA published a 2011 Code of Conduct where it wrote that it prohibited "market manipulation" and required "natural[] compl[iance] with the laws, regulations and professional standards" from its employees, including employees of BNP Securities.

j. UBS AG, which reports on behalf of UBS Securities, boasted in its 2010 Annual Report that it "pursue[s] the highest levels of compliance through extensive employee training and investment in risk management processes and standards." Additionally, it emphasized that it evaluated its employees "base[d]" in part on "whether they . . . operate with a high level of integrity and in compliance with UBS policies." UBS Securities also claimed in its global Code of Business Conduct and Ethics that it was "committed to . . . complying with relevant laws, rules and regulations, including applicable antitrust and competition laws."

k. Morgan Stanley, which reports on behalf of MS&Co., wrote in its 2010 Annual Report that it "has established procedures based on legal and regulatory requirements on a worldwide basis that are designed to foster compliance with applicable statutory and regulatory requirements. In addition, Morgan Stanley has and continuously develops various procedures addressing such issues as . . . sales and trading practices . . . ." Morgan Stanley wrote in its 2013 Code of Ethics and Business Conduct that it "seek[s] to outperform our competition fairly and honestly through superior performance. . . . No one should take unfair advantage of anyone through manipulation, concealment, abuse of privileged information or misrepresentation of facts."

l. The Toronto-Dominion Bank, which reports on behalf of TD Securities, wrote in its 2010 Code of Conduct and Ethics "that concern for what is right, including compliance with the law, should be the first consideration in all business decisions and actions."

m. Nomura Holdings, Inc., which reports on behalf of Nomura Securities, wrote in its 2010 Annual Report that it was "striving to strengthen and improve its internal

control system in order to promote proper corporate behavior throughout the [Nomura] Group from the viewpoints of . . . complying with laws and regulations [and] controlling risks . . ."; and that it "works to prevent behavior that may give rise to suspicion of violations of legal regulations."

272. Defendants' conspiracy was inherently self-concealing because it relied on secrecy for its successful operation and the conduct took place in private electronic chat rooms. Had the public learned that Defendants conspired to fix prices in the GSE Bond market, their conspiracy could not have continued for as long as it did. Accordingly, Plaintiffs could not have learned of Defendants' anticompetitive conduct prior to June 2018, when confidential sources revealed that the DOJ Antitrust Division was investigating dealers for fixing the prices of GSE Bonds purchased and sold by investors.

273. Because of Defendants' fraudulent concealment, Plaintiffs and the Class were not aware of Defendants' misconduct and could not have discovered it through the exercise of due diligence until June 2018, when the DOJ's price-fixing investigation was revealed publicly for the first time. Accordingly, Plaintiffs assert that the applicable statutes of limitations on Plaintiffs' claims were tolled. Defendants are also equitably estopped from asserting any statute of limitations defense.

CLAIM FOR RELIEF

(For Violation of Section 1 of the Sherman Act, 15 U.S.C. §1, *et seq.*)
(Against All Defendants)

274. Plaintiffs incorporate by reference and re-allege the preceding allegations, as though fully set forth herein.

275. Defendants and their co-conspirators engaged in a combination and conspiracy in an unreasonable and unlawful restraint of trade in violation of Section 1 of the Sherman Act, 15 U.S.C. §1, *et seq.*

276. During the Class Period, Defendants controlled the supply of GSE Bonds available to investors and were horizontal competitors in the GSE Bond market.

277. The combination and conspiracy consisted of a continuing agreement, understanding, and concerted action between and among Defendants and their co-conspirators in furtherance of which Defendants fixed, maintained, and charged artificial prices for GSE Bonds to investors. Defendants' conspiracy is a *per se* violation of the federal antitrust laws and is, in any event, an unreasonable and unlawful restraint of trade.

278. Defendants' conspiracy and resulting impact on GSE Bond prices paid by investors occurred in and affected U.S. interstate commerce.

279. As a proximate result of Defendants' unlawful conduct, Plaintiffs and members of the Class have suffered injury to their business or property. These injuries included, but were not limited to, paying artificial and non-competitive prices for GSE Bonds as a proximate result of Defendants' anticompetitive conduct. Plaintiffs and the Class were also deprived of the benefits of free and open competition in the GSE Bond market.

280. Plaintiffs and members of the Class are each entitled to treble damages for the Defendants' violations of the Sherman Act alleged herein, and a permanent injunction restraining Defendants from engaging in additional anticompetitive conduct.

PRAYER FOR RELIEF

Accordingly, Plaintiffs demand relief as follows:

A. For an order certifying this lawsuit as a class action pursuant to Rules 23(a) and (b)(3) of the Federal Rules of Civil Procedure, designating Plaintiffs as the Class representatives, and appointing their counsel as Class counsel;

B. For the unlawful conduct alleged herein to be adjudged and decreed to be an unlawful restraint of trade in violation of Section 1 of the Sherman Act;

C. For Defendants, their subsidiaries, affiliates, successors, transferees, assignees and the respective officers, directors, partners, agents, and employees and all other persons acting or claiming to act on their behalf, be permanently enjoined and restrained from continuing and maintaining the conspiracy alleged in the Complaint;

D. For a judgment awarding Plaintiffs and the Class damages against Defendants for Defendants' violations of the federal antitrust laws, in an amount to be trebled in accordance with such laws;

E. For an award to Plaintiffs and the Class of their costs of suit, including reasonable attorneys' and experts' fees and expenses;

F. For an order enjoining Defendants from engaging in further anticompetitive conduct in the GSE Bond market so that public confidence in this market can be restored; and

G. For such other and further relief as the Court may deem just and proper.

DEMAND FOR A JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiffs respectfully demand a trial by jury of all issues so triable.

Dated: July 12, 2019

s/ Christopher M. Burke
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CERTIFICATE OF SERVICE

I hereby certify that on July 12, 2019, I caused the foregoing to be electronically filed with the Clerk of the Court using the CM/ECF system, which will send notification of such filing to the email addresses denoted on the Electronic Mail Notice List.

s/ Christopher M. Burke
Christopher M. Burke